deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 Waiver of Rights

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5,06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, consultants partners, employees, agents, subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners. employees, agents, consultants subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

- 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
- 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 Acceptance of Bonds and Insurance; Option to Replace

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01,B, Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 Partial Utilization, Acknowledgment of Property Insurer

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or

received from the superintendent shall be binding on Contractor.

6.02 Labor: Working Hours

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 Services, Materials, and Equipment

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

- 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
- 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "Or-Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
- 1. "Or-Equal" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a, in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,
 - 3) it has a proven record of performance and availability of responsive service; and
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
- 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;
 - b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

- c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
- 3) will identify:
- a) all variations of the proposed substitute item from that specified, and
- b) available engineering, sales, maintenance, repair, and replacement services:
- 4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,
- B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.
- 6.06 Concerning Subcontractors, Suppliers, and Others
- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
- 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor
- shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual

or entity except as may otherwise be required by Laws and Regulations.

- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an approagreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer,, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 Patent Fees and Royalties

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, employees, agents, consultants subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 Laws and Regulations

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work,
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners. employees, agents, consultants subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.
- B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. Loading Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work, Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- 1. all persons on the Site or who may be affected by the Work;
- 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
- 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Draw-

ings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.
- 2. Samples: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.
 - a. Submit number of Samples specified in the Specifications.
 - b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

- I. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:
 - a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;
 - c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and
 - d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.
- 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal,

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

- 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
- 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions,
- 3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17,C,3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17,C,1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
- 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 1. observations by Engineer;
- 2. recommendation by Engineer or payment by Owner of any progress or final payment;
- 3, the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
- 4. use or occupancy of the Work or any part thereof by Owner;
- 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 - 6. any inspection, test, or approval by others; or
 - 7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

- B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:
- 1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
- 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 Delegation of Professional Design Services

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer,

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

Related Work at Site 7.01

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
- 1. written notice thereof will be given to Contractor prior to starting any such other work; and
- 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and

properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
- 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
- 2. the specific matters to be covered by such authority and responsibility will be itemized; and
- 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 Legal Relationships

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 Replacement of Engineer

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8:03 Furnish Data

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 Pay When Due

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 Lands and Easements; Reports and Tests

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 Insurance

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 Change Orders

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 Inspections, Tests, and Approvals

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 Undisclosed Hazardous Environmental Condition

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 Evidence of Financial Arrangements

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 Owner's Representative

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 Visits to Site

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep

Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 Authorized Variations in Work

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 Rejecting Defective Work

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 Determinations for Unit Price Work

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor, Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

Requirements 9.08 of Contract Decisions on Documents and Acceptability of Work

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show

partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

Limitations on Engineer's Authority and Responsibilities

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents,
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 Unauthorized Changes in the Work

A.Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 Execution of Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
- 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
- 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
- 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 Notification to Surety

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 Claims

- A. Engineer's Decision Required: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. Notice: Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. Engineer's Action: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
 - 1. deny the Claim in whole or in part,
 - 2. approve the Claim, or
- 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

- A. Costs Included: The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.
- 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
- 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
- 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and

Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

- 4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
 - 5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have

resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.
- B. Costs Excluded: The term Cost of the Work shall not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.
- C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall

be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

- 1. Contractor agrees that:
- a, the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
- b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

- 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement,

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
- I. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
- 2. there is no corresponding adjustment with respect any other item of Work; and
- 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05,
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
- 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
- 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an

- allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
- 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. Contractor's Fee: The Contractor's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or
- 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 Change of Contract Times

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 Delays

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times , or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
- 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
- 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
- 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to

be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.
- F. Uncovering Work as provided in Paragraph 13.03,E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- 13.05 Owner May Stop the Work

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 Correction or Removal of Defective Work

- A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 Correction Period

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

- 1. repair such defective land or areas; or
- 2. correct such defective Work; or
- 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
- 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it. Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress

payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14,02 Progress Payments

A. Applications for Payments

- 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
- 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
- 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications

- 1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
- 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;

- b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
- 3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a, inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
- 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
- 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent

inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replace-
- b, the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

- 1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work:
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
- 2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

Substantial Completion 14.04

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor, If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial

Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 Partial Utilization

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.
- 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
- 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
- 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
- 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 Final Inspection

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals

that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

A. Application for Payment

- 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
- 2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.
- B. Engineer's Review of Application and Acceptance
- 1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and, will be paid by Owner to Contractor.

14.08 Final Completion Delayed

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

- A. The making and acceptance of final payment will constitute:
- 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
- 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance

with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will justify termination for cause:
- 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
- 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
- 3. Contractor's disregard of the authority of Engineer; or
- 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
- 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),
- 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

- 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance. Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 Owner May Terminate For Convenience

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
- 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

- 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
- 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
- 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 Methods and Procedures

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
- 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
- 2. agrees with the other party to submit the Claim to another dispute resolution process, or
- 3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
- 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Controlling Law

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 Headings

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SCOPE

- A. The work covered by this specification includes the furnishing of all labor, materials, equipment and incidentals and the performing of all operations in connection with remediation work as herein specified.
- B. The work covered by this Section shall include the property described in this document and shown on Figure 1.

1.2 GENERAL

- A. The project generally consists of remediation of the former Keddy Mill including removal and disposal of soils and solid waste debris contaminated with polychlorinated biphenyls (PCBs) covering the floors of the building, all asbestos-containing materials and universal wastes from inside the building, all oil and hazardous materials from inside the building, and all non-hazardous solid waste debris from inside the building. Concrete floors contaminated with oil and hazardous materials must also be decontaminated.
- B. The Contractor shall submit to the Owner a plan identifying the sequence of events and schedule for this project.
- C. Obtain necessary remediation/construction permits from the Town of Windham, Maine.
- D. All asbestos-containing materials identified in the Asbestos Survey Report prepared by Jacques Whitford Company, Inc. on January 16, 2004, as well as a follow up Asbestos Survey completed by Ransom Environmental Consultants, Inc. on October 1, 2007 (both reports are included as Attachment A), shall be removed in accordance with Maine Department of Environmental Protection (DEP) requirements. The Contractor shall notify the Maine DEP of the intent to remove asbestos-containing materials from the site building(s) on behalf of the Owner and obtain necessary permits.
- E. The Contractor shall remove and properly dispose of Universal Wastes contained within the site building including fluorescent light bulbs, PCB-containing ballasts, and thermostats. The Contractor shall submit certification to the Owner after Universal Waste removal.
- F. The Contractor shall remove and properly dispose of all PCB-contaminated dirt, sludge, and exposed sub-slab soil, oil-filled piping, and PCB-contaminated solid waste debris covering the floors of the former Keddy Mill building as identified on Figure 1. This material is described in the Self-Implementing Cleanup of PCB Remediation Waste Phase I, completed by Ransom Environmental Consultants, Inc., dated April 28, 2006 (included as Attachment B) and anticipated to be disposed of as Special Waste as defined by the Maine Department of Environmental Protection Solid Waste Regulations.

G. The Contractor shall remove and properly dispose of all non-hazardous solid waste debris located in areas identified on Figure 1. The Contractor shall assist the Engineer in activities related to defining the vertical and horizontal extents of the solid waste debris for removal and disposal.

1.3 PROTECTION

- A. Care shall be taken to protect the public at all times. Materials shall not be deposited or stored on adjacent properties (without permission) or in areas accessible to the public.
- B. Care shall be taken to protect the adjacent Presumpscot River at all times. Materials shall not be deposited in the River or on the riverbanks.
- C. Use all means necessary to prevent the spread of dust during the performance of the work of this section. Thoroughly moisten all surfaces as required to prevent dust from spreading to adjacent properties or the River, as well as prevent dust from being a nuisance to the workers and neighbors.

1.4 PROTECTION OF ADJACENT STRUCTURES

- A. The remediation work shall be carried on in a manner that will insure the safety of adjacent properties which are occupied, and persons occupying such property against any damages or injuries which might occur from activities at the site, and so as not to interfere with the use of adjacent buildings and structures or the free and safe passage to and from the same.
- B. Take every precaution to guard against any movement or settlement of adjacent buildings, sidewalks or streets and provide and place bracing or shoring necessary or proper in connection therewith, and be solely and entirely responsible for the complete safety and support of such buildings and street, and be solely liable for any such movement or settlement and any damage or injury cased thereby or resulting there from. If at any time the safety of any adjacent building or structure shall appear to the Owner or to the Contractor (or should reasonably appear to the Contractor if the Contractor were in the exercise of caution) to be endangered, then cease operations and, at the sole expense of the Contractor, and however great the same may be, take all proper means to support such building or structure and do not resume operations until permission has been secured in writing from the Owner.
- C. Take adequate precautions to protect all walks, roads, streets, curbs, pavements, trees and planting, outside the property line, and repair and replace or otherwise make good, as directed by the City, any such or other damage so caused.
- D. The Contractor shall install adequate barricades, barriers and fences to ensure the public safety during the services.

1.5 UTILITIES

A. Discontinuance or Interruption: Before starting remediation, the Contractor shall be solely responsible for making all necessary arrangements and for performing any necessary work involved in connection with the continuance or interruption of all public and private utilities or services under the jurisdiction of the utility companies or corporation, Police Department, Fire Department, and Public Works Department such as gas, electricity, steam, low tension system, telephone, telegraph, police signal, fire alarm, water, sanitary sewer, storm drainage, and without limiting the generality of the foregoing, including any system under this contract.

B. Protection: Should any damage occur to a utility which is to remain as a result, in the judgment of the City, of this operation, repair all damage to any such utility to the satisfaction of the City, at no expense to the City.

PART 2 - EXECUTION

2.1 ASBESTOS-CONTAINING MATERIAL

- A. Provide and set up necessary engineering and safety controls to access hazardous materials within the former Keddy Mill building including walkways, railings or other barricades, and flooring supports.
- B. Provide and set up necessary environmental and engineering controls to contain potentially hazardous dusts from impacting the public, workers at the site, or occupants of adjacent properties.
- C. Remove all asbestos-containing materials from the Keddy Mill building, or located with other debris at the site including but not limited to piping and equipment insulation, joint compound, floor and ceiling tiles, textured floor and wall materials, fallen asbestos debris, and fluorescent bulbs and lighting ballasts as described in Appendix A.
- D. Properly dispose of all asbestos-containing materials in accordance with State of Maine and federal guidelines.

2.2 PCB-CONTAMINATED DIRT, SLUDGE, EXPOSED SUB-SLAB SOIL, AND SOLID WASTE REMOVAL, AND DISPOSAL

- A. Remove portions of existing structures or foundations restricting access to areas of contaminated soil or contaminated solid waste to be removed as shown on Figure 1.
- B. Contractor shall work with the Engineer to define the extent of contamination during removal activities. Engineer will be onsite during removal activities and provide on-site determination that contaminated dirt, sludge, exposed sub-slab soil, and contaminated solid wastes are removed (via visual observation).
- C. Load waste materials into roll-off containers or trucks for storage prior to disposal in accordance with regulatory guidelines. Soil should be stored in an area of the site that is not accessible to the public and will not interfere with other remediation operations at the site, or with operations at adjacent properties. The Contractor shall sample the material to characterize the waste as required by the soil receiving facility designated by the Contractor. Historical soil sampling laboratory analytical results are summarized in Table 1.
- D. Properly transport and dispose of contaminated soils and contaminated solid waste at a licensed disposal facility in accordance with State of Maine and federal guidelines.

2.3 OIL, HAZARDOUS MATERIALS, AND UNIVERSAL WASTES

- A. Remove all oil, hazardous materials, and universal wastes from the Keddy Mill building.
- B. Remove all 55-gallon drums and 5-gallon pails, buckets and cans from the former Keddy Mill building.
- C. Universal wastes to be removed include fluorescent lights and ballast and thermostats.
- D. Properly dispose of all universal wastes and other oil or hazardous materials containers, including the aboveground storage tanks as shown on Figure 1, in accordance with State of Maine and federal guidelines.

2.4 PCB CONTAMINATED OIL-STAINED AREAS, EQUIPMENT, AND WALLS CLEANING

- A. Scrape oil from heavy oil-stained areas throughout the former Keddy Mill, including equipment and walls.
- B. Properly dispose of PCB-contaminated oil material in accordance with State of Maine and federal guidelines.
- C. Jet steam clean oily areas with containment around the area being cleaned. Capture, collect, and properly dispose of wash water in accordance with State of Maine and federal guidelines.

2.5 NON-HAZARDOUS SOLID WASTE REMOVAL AND DISPOSAL

- A. Remove portions of existing structures or foundations restricting access to areas of non-hazardous solid waste debris to be removed as shown on Figure 1.
- B. Load non-hazardous solid waste debris into roll-off containers or trucks for storage prior to disposal as a non-hazardous solid waste in accordance with Maine DEP guidelines. The solid waste should be stored in an area of the site that is not accessible to the public and will not interfere with other remediation operations at the site, or with operations at adjacent properties.
- C. Properly transport and dispose of non-hazardous solid waste debris at an appropriate disposal facility in accordance with State of Maine and federal guidelines.

2.6 CLEAN UP

- A. All debris resulting from the operation under this contract and all tools and apparatus are to be removed from the site at the completion of the work and site left clear and free from hazards, to the satisfaction of the City and Owner.
- B. Bidders shall assume that all movable equipment and furnishings left on the premises during the bidding period shall remain the property of the Owner and shall be removed by him prior to commencement of demolition and removal. Any such movable equipment or furnishings remaining on the premises after the date indicated shall become the property of the Contractor and he shall remove same from premises.
- C. All fixed equipment which is on the premises during the bidding process shall become the property of the Contractor and he shall remove same from premises.

D. At the conclusion of the demolition and removals, the Contractor shall sweep the surrounding streets to the project site.

END OF SECTION

SECTION 02320

REMEDIATION, MATERIAL STORAGE, TRANSPORT, AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The provisions of the Contract apply to the work specified in this Section.

1.2 DESCRIPTION OF WORK

A. Work Included:

Furnish all labor, materials, equipment and incidentals necessary to perform all remedial
activities, including removal, material storage, and appropriate disposal of oil- or PCBcontaminated soil and solid waste, non-hazardous solid waste, asbestos-containing
materials, and other universal wastes, as required to complete the work described in
Section 01010 and specified herein.

1.3 RELATED SECTIONS

A. Section 01010 – Summary of Work

1.4 SUBMITTALS

- A. Shall be submitted for all items to be furnished.
- B. Submittals required under this section include, but are not limited to, the following:
 - 1. Materials Testing Results

1.5 PROTECTION OF WORK

- A. The Contractor shall execute the work so that no damage occurs to adjacent utilities, structures, the river, streets, sidewalks, property, or any other installation located in or adjacent to work areas. Damaged utilities shall be repaired with similar or better materials of the same size and to the requirements of the utility owner. The Contractor shall have on site the necessary manpower, materials and equipment as required to protect and maintain existing utilities during remedial activities.
- B. Removed materials and wastes temporarily stored on site shall be kept free from water, snow and ice during remediation. Contaminated materials or wastes shall not be placed in water. Water shall not be allowed to rise upon or flow over the hazardous and non-hazardous wastes.
- C. The Contractor shall maintain all benchmarks, monuments and other reference points and, if disturbed, shall replace them at no additional cost to the Owner.

- D. Remediation equipment shall be of such size and type, and used in a manner, that will not damage existing items on the property or adjacent properties such as, but not limited to, paved surfaces, utilities, structures, the riverbank, and trees without consent of the Owner.
- E. Remediated areas and surfaces shall be maintained by the Contractor as to not spread contamination once cleanup has started. The Engineer shall observe remedial activities performed by the Contractor. Remediation will be considered complete upon visual inspection by the Engineer, and as necessary, confirmatory sampling.
- F. The Contractor shall take whatever steps necessary to prevent catch basins and drain lines from receiving silt and sediment washed from project work areas. The Contractor shall clean out catch basins and drain lines that have not been successfully protected.

1.6 QUALITY ASSURANCE

- A. Codes and Standards: Perform remediation work in compliance with applicable requirements of governing authorities having jurisdiction.
- B. Testing and Inspection Service: The Owner may employ an environmental consultant and testing laboratory to perform soil or material testing and inspection services for quality control testing during remediation operations. Contractor shall provide access and allow Owner to perform testing.
- C. Test Reports: Contractor shall submit the following reports directly to the Engineer from an approved testing service, with copy to the Contractor:
 - 1. Test reports on each material to be disposed at a facility licensed to handle the wastes

PART 2 - EXECUTION

2.1 INSPECTION

A. Examine the areas and conditions under which remedial activities are to be performed and notify the Engineer in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

2.2 REMEDIATION SCOPE

A. Scope:

- 1. The Contractor shall remove the following as outlined on the Keddy Mill Site Remediation Plan and as directed by the Engineer.
 - a. PCB-contaminated dirt, sludge, exposed sub-slab soils, and solid waste materials;

- Oil or hazardous material containers or containers formerly used to store oil or hazardous materials;
- c. Oil or hazardous material-contaminated soils and solid waste debris;
- d. Asbestos-containing materials and other universal wastes; and
- e. Non-hazardous solid waste debris.

B. Classifications:

- 1. Asbestos-Containing Materials and Universal Wastes Remediation
 - a. Removal and disposal of asbestos-containing materials identified in the former mill building as indicated on the Keddy Mill Site Remediation Plan.
 - b. Typical Asbestos-Containing Materials include joint compound materials associated with sheetrock in the first and second floor office areas, textured wall material in the second floor stairwell, vinyl asbestos tiles and associated mastic covering the floor in the second floor office areas as well as floors in the second floor stairwell, window glazing and caulking associated with the parking lot-side windows in the first and second floor office areas as well as windows in the manufacturing portion of the first floor, transite boards utilized as walls within the first and second floors, textured ceiling material in the first floor offices, corrugated transite panels utilized as the exterior walls and roof of the southeastern warehouse, and small wood-framed window glazing in basement and sub-floor areas.

2. PCB Remediation:

- a. Removal and disposal of dirt, sludge, grease, oil, and solid waste debris contaminated with polychlorinated biphenyls (PCBs) located on the floors, walls, support structures, and ceilings of the former mill building as indicated on the Keddy Mill Site Remediation Plan. Building materials include, but are not limited to, concrete, brick, steel, and wood. Several oil pipelines throughout the mill building contain heavy oil contaminated with PCBs and are required to be removed.
- 3. Oil and Hazardous Materials and Universal Wastes Remediation:
 - a. Removal and disposal of oil and hazardous materials and universal wastes identified in the former mill building as indicated on the Keddy Mill Site Remediation Plan. Containers currently storing or perceived to formerly store oil or hazardous substances should be removed and properly disposed of. Any containers storing oil, hazardous substances, or unknown substances encountered during the site remediation are required to be removed and properly disposed of.
 - b. Dirt, sludge, exposed sub-slab soil, building surfaces, or solid waste debris stained with oil or hazardous materials must be cleaned or removed appropriately. Oil-

- stained soil will require being scraped off floors in the former mill building as indicated on the Keddy Mill Site Remediation Plan and disposed of appropriately.
- c. Typical Containers include 55-gallon drums, former above-ground storage tanks, buckets, and other miscellaneous containers. Typical surfaces stained with oil or hazardous materials or covered with contaminated soil or materials include floors, walls, support structures, and ceilings.
- d. Universal wastes, including fluorescent light bulbs, ballasts, and thermostats, encountered during remedial activities shall be removed and properly disposed of.

4. Non-hazardous Solid Waste Remediation

- a. Removal and disposal of solid waste debris located throughout the former mill building. Solid waste debris shall be disposed of as a non-hazardous waste as determined by the Engineer. Solid waste debris contaminated with oil, PCBs, asbestos, or other hazardous materials must be removed, segregated from non-hazardous solid waste, and disposed of appropriately.
- Typical Materials: piles of brick, rocks, concrete, steel, wood, pallets, and other miscellaneous debris.

C. Site Inspections:

- The Engineer or an independent environmental professional contracted by the Owner shall monitor the remediation work and shall make the determination that remediation is complete.
- 2. Remediation will be determined to be completed upon visual inspection of the areas of remediation and confirmatory sampling, as necessary.

D. Confirmatory Sampling:

- Confirmatory sampling will be conducted by the Engineer upon removal of soil and solid
 waste debris from the concrete floors on the basement and first floor levels of the former
 mill building to determine the vertical extent of PCB contamination.
- 2. Determination of remaining contamination will require further remedial activities; however, further remediation will be conducted as a second phase of the project and will not be completed during this remediation phase of work.

2.3 TEMPORARY WASTE MATERIAL STORAGE

- A. Removed contaminated materials shall be segregated from non-hazardous solid waste to the extent feasible.
- B. The Contractor shall directly load contaminated soil and solid waste into trucks or suitable (DOT-approved) roll-off containers for off-site disposal. Containers shall be securely covered at all times during which active loading is not occurring. Containers are to be sealed, secured, and properly labeled at the end of each work day.

C. The Contractor shall comply with all applicable State and Federal regulations for the management and disposal of wastes.

2.4 TRANSPORT AND DISPOSAL OF WASTES

- A. No waste materials shall be removed from the site or disposed of by the Contractor except as specified by the Engineer. Materials shall be neatly contained so as to inconvenience as little as possible the public and adjoining property owners until disposed of as specified below.
- B. Non-hazardous material shall be properly disposed of by the Contractor. Remove trash, debris, and non-hazardous waste materials from work areas and legally dispose of it at the municipal landfill, if permitted, or in a lawful and acceptable manner, at no additional cost to the Engineer.
- C. Hazardous materials, including asbestos, PCB-contaminated soils, and contaminated solid debris is required to be disposed of at a facility licensed to handle the specific wastes. The Contractor shall comply with all applicable State and Federal regulations for the disposal of hazardous wastes.

2.5 QUALITY CONTROL

- A. Quality Control Testing during Construction: At the discretion of the Owner or Engineer, allow testing service to examine and test soil, concrete, or other materials impacted by historic contamination. Before further remediation work is performed, test results meeting approval from the Owner or Engineer shall be obtained.
- B. The Engineer shall perform visual inspections as remediation progresses to ensure complete cleanup.
- C. If, in the opinion of the Engineer based on testing services reports and inspection, is not completed to a satisfactory level in a given area of the former mill building, the Contractor shall provide additional cleanup and testing at no additional expense to the Owner.

2.6 MAINTENANCE

- A. Protection of Remediated Areas:
 - 1. Limit traffic in remediated areas to prevent re-contamination.
 - 2. Keep remediated areas free of trash and debris.
- B. Where remediated areas are disturbed by subsequent remediation activities, further cleanup activities must be completed to the satisfaction of the Engineer.

2.7 TERMS AND CONDITIONS:

- A. The Contractor shall comply with all applicable regulations, including, but not limited to, 29 CFR 1910 and 29 CFR 1926. All on-site personnel shall be 40-hour health and safety trained. The Contractor shall comply with a site-specific Health and Safety Plan (HASP) developed by the Owner-contracted environmental professional.
- B. The Engineer shall review and approved the remediation activities and disposal method selected for use by the Contractor.
- C. Access to the work area shall be limited to the Contractor, the Contractor's employees, the Engineer, and other persons designated by the Owner. No one shall be allowed to enter the work area without appropriate personal protective equipment (PPE).
- D. During remedial activity, the Contractor shall establish work zones to limit access to the site and to support decontamination of personnel and equipment. The Contractor shall establish an exclusion zone around the remediation area and allow admittance only by personnel directly involved with the remediation.
- E. The Contractor shall implement erosion and sediment controls as necessary in accordance with MDEP requirements to prevent adverse impact to the adjacent river or riverbank.
- F. All equipment involved with remedial work shall be inspected by the Engineer and documented "clean" prior to and following remedial work.
- G. Upon completion of remediation work, the Owner shall contract an independent industrial hygienist to conduct a visual inspection to confirm removal of dirt, oil, grease, hazardous substances, and universal wastes from the interior building surfaces at the job site. The Engineer contracted by the Owner shall monitor the remediation work and shall make the determination that remediation is complete.
- H. For remediation methods that generate dust, the Contractor shall conduct daily cleanup by vacuuming all dust using an industrial vacuum cleaner equipped with High Efficiency Particulate (HEPA) filtration. Use of household vacuum cleaners or shop-vacs without HEPA filtration is prohibited.
- I. The Contractor shall transport and dispose of removed hazardous and non-hazardous materials in accordance with State and Federal regulations.

END OF SECTION

Table 1: 2003 - 2006 Keddy Mill Sail Sampling PCB Analytical Results

Sample Identifier	Sample Type	Location	Result Units	Collection Date	Amelor-1016	Aroclor-1221	Arcolor-1232	Aroclor-1242	Arcolor-1248	Arcelor-1254	Aroctor-1260	PCB Total
SSS	Soll/Solids	Basement, Area of Broken Concrete	mg/kg	25-Nev-03	< 39.2	< 39.2	< 39,2	< 39.2	< 39.2	45	32	77
SS6	Soil/Solids	Basement, Floor Sump, Mok Building	mg/kg	25-Nov-03	<48.2	< 48.2	< 48,2	< 48.2	< 48.2	120	54	1.74
SS7	Sludge/Solids	Ist floor, Maintenance Shop	mg/kg	25-Noy-03	<33.1	< 33.1	<33,1	<33,I	<33.1	13	< 33.1	13
SS8	Sludge/Solids	1st floor, Maintenance Shop	mg/kg	25-Nov-03	< 54,6	< 54.6	< 54.6	< 54,6	< 54.6	11	< 54.6	11
SS9	Sludge/Solids	lst floor, Maintenance Shop	mg/kg	25-Nov-03	3.2	< 47,6	< 47,6	< 47.6	< 47.6	ΪO	3.5	16.7
SS10	Sindge/Solids	Ist Heor, Meh Building	mg/kg	25-Nov-03	< 43,9	< 43.9	< 43.9	< 43.9	< 43.9	5.1	< 43,9	5,1
SSIOIA	Soli/Solids	Basement, Floor Sump (split sample)	mg/kg	13-Jan-04	<4,41	<4,41	<4.41	<4,41	<4.41	262	<4.41	262
SSTOLB	Scil/Solids	Basement, Floor Sump (split sample)	mg/kg	13-Jan-04	<31	<31	<31	<31	গ্ৰ	570	<3I	570
38102	Soil/Solids	Basement, Diet/Debris on Floor, Melt Building	mg/kg	13-Jan-04	<6.68	≺6.68	<6.68	<6,68	<6.68	71.1	<6.68	71,1
\$\$103	Soil/Solids	Basement, Dirt/Debris on Floor, Melt Building	mg/kg	13-Jan-04	<29.8	<29.8	<29.8	<29.8	<29.8	38	<29.8	138
SS104	Soil/Solids	Basement, Digt/Debris on Floor, Molt Building	mg/kg	13-Jan-04	<29.9	<29,9	<29.9	<29.9	<29.9	100	<29,9	100
1W-01	Wipe	2nd floor, Stockroom	μg	27-Oct-05	<5.0	<5.0	<5.0	3 J	<5.0	24	17	44
J¥y-02	Wipe	2nd floor, Office Area	μg	27-Oct-05	<5.0	<5,0	<5.0	<5.0	<5,0	<5.0	<5.0	<5.0
TW-03	Wipe	lst floor Hall Outside Maintenance Shop	μg	27-Oct-95	<5,0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
IWD-01	Wood	ist floor, Melt Building	mg/kg	27-Oct-95	<2.2	<2.2	<2.2	17	<2.2	12	7.9	36.9
WD-02	Wood	Basement, Generator Room	mg/kg	2-Nov-05	<7.0	<7.0	<7.0	71	<7,0	34	<7.0	105
IS-01	Sludge/ Solids	lst floor, Storage & Manufacturing	mg/kg	27-Oct-05	<4.5	<4.5	<4.5	<4,5	<4.5	.89	<4.5	89
IS-02	Shudge/ Solids	1st floor, Storage & Manufacturing	mg/kg	27-Oct-05	<41	<41	<41	<4)	<41	320	<4)	320
1S-03.	Oily Material	Basement, Melt Building Wall	mg/kg	27-Oct-05	<1.0	<1.0	<1.0	3.6	<1.0	3.2	<1,0	6.8
IS-04	Oily Material	Basement, Melt Building, Beneath Pipe Cutoff	mg/kg	27-Oct-05	⊲.1	<[,]>	t,l>	1.7	<t.i< td=""><td>8.5</td><td>∢IJ</td><td>10.2</td></t.i<>	8.5	∢IJ	10.2
1S-05	Sub-Slab Sample	Ground floor, Storage & Manufacturing	mg/kg	27-Oct-05	<3,9	<3.9	<3.9	<3,9	<3.9	66	31	97
1S-06	Sludge/ Solids	Ground floor, Storage & Manufacturing	mg/kg	27-Oct-05	<5.3	<5.3	<5,3	<5.3	35	62	27	124
IS-07	Studge/Solids	Ground fleor, Press Building	mg/kg	27-Oct-05	<1,0	<1.0	<1.0	<1:0	<1.0	1,8	<1.0	1.8
IS-08	Sludge/Solids	Ground floor, Press Building Pit	mg/kg	27-Oct-05	<1.0°	<1.0	<1,0	<1.0	<1.0	<1.0	<1.0	<1.0
IS-09	Słuddge/ Solids	Basement, adjacent to Main Stairs	mg/kg	2-Nov-05	<1.0	<1,0	<1.0	<1,0	2.2	3.6	<1.0	5,8
1S-10	Sludge/ Solids	lst floor, Melt Building	mg/kg	27-Oct-05	<6.0	<6.0	<6.0	<6,0	<6.0	41	<6.0	41
S-11	Sludge/Solids	lst floor, Melt Building	mg/kg	2-Nov-05	<3.4	<3,4	<3.4	<3.4	15	39	15	69
8-13	Sludge/ Solids	Duplicate of IS- 99	mg/kg	2-Nov-05	<1.0	<1.0	<1.0	<1.0	2	2.9	<1.0	4,9
IS-14	Sludge/Solids	lst floor, Melt Building	mg/kg	2-Nov-05	<5,2	<5.2	<5.2	<5,2	<5.2	27	<5.2	27
IS-15	Oily Materials	Basement, Furnace Wali	mg/kg	2-Jan-06	<26	<26.	<26	<26	240	<26	<26	240
IS-16	Oily Materials	Ist Floor, Melt Building	mg/kg	2-Jan-06	<6.3	<6,3	<6,3	<6.3	110	<6.3	<6,3	110
15-17	Oily Materials	1st Ficor, Melt Building	mg/kg	2-Jan-06	<4.9	<4.9	<4.9	5,1	<4.9	<4.9	<4.9	5.1
IS-18	Oily Materials	Ground floor, Storage & Manufacturing	mg/kg	2-Jan-U6	<5.0	<5,0	<5,0	<5.0	<5.0	<5;0	<5.0	<5,0
quip, Blank	Aqueous	Rinsate Blank	μgA	27-Oct-05	<1.0	<1.0	<1,0	<1.0	<1.0	<1.0	VIL	RE

APPENDIX A

Asbestos-Containing Materials Surveys

ASBESTOS SURVEY REPORT FORMER KEDDY MILL BUILDING 7 DEPOT STREET WINDHAM, MAINE

Prepared for:

Mr. Stephen A. Etzel Hudson Realty Capital, LLC 2 Market Street, 6th Floor Portland, Maine

Prepared by:

Ransom Environmental Consultants, Inc.

400 Commercial Street, Suite 404 Portland, Maine 04101 (207) 772-2891

> Project 076063 October 1, 2007

Amy Borslien Project Scientist D. Todd Coffin, P.G., C.G. Senior Project Manager

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1.0 SUMMARY

Ransom Environmental Consultants, Inc. (Ransom) is pleased to provide Hudson Realty Capital, LLC with an asbestos survey of the property located at 7 Depot Street in Windham, Maine (the "Site"). The asbestos survey was performed on September 19, 2007, under the supervision of Ms. Amy Borslien of Ransom.

Non-friable and friable ACM were identified at the Site. Materials identified as ACM that will be impacted by the planned demolition project must be properly removed or abated prior to the renovation activities. A licensed Asbestos Abatement Contractor must conduct abatement work in accordance with a project design prepared by a U.S. Environmental Protection Agency (EPA) Asbestos Abatement Project Designer.

The following building materials present at the Site contain asbestos at concentrations greater than one percent:

- 1. Asbestos Cement Board;
- 2. Sink Undercoating;
- 3. 1-inch by 12-inch Cement Backing;
- 4. Wood Paneling Mastic;
- 5. Gaskets;
- 6. Residual Roofing Material (2 types);
- 7. Cement Board (2 types);
- 8. Interior Roof Sealant;
- 9. Gloves;
- 10. Cement Siding;
- 11. Light Backing;
- 12. Electrical Panel Board;
- 13. Corrugated Roofing Material; and
- 14. Canvas Backing (to large TSI).

A previous survey was completed by Jacques Whitford Company, Inc. (JWC) of Portland, Maine in January 2004. This survey identified the following materials as containing asbestos at greater than one percent:

- 1. Joint Compound;
- 2. Textured Wall Material;
- 3. 12-inch by 12-inch Brown Floor Tile and Associated Mastic;
- 4. 12-inch by 12-inch Black Floor Tile and Associated Mastic;
- 5. Window Glazing;
- 6. Window Caulking;
- 7. 12" White Floor Tile and Associated Mastic;
- 8. Asbestos Cement Board;
- 9. Textured Ceiling Material; and
- 10. Exterior Corrugated Asbestos Cement Board;

Ransom collected confirmatory samples of the joint compound, 12-inch by 12-inch black floor tile and mastic, and 12-inch by 12-inch brown floor tile and mastic. These samples all tested positive for asbestos confirming the original analysis.

2.0 FACILITY DESCRIPTION

The Site Building is located at 7 Depot Street (the "Site") in Windham, Maine. The Site Building is an abandoned mill building, and occupies an approximate footprint of 33,000 square feet. The building has a basement, sub-floor, first level, and a limited second level. Interior finishes include drywall, acoustical boards, wall panels and associated mastics, ceiling tiles, cove base and associated mastics, and vinyl floor tiles and associated mastics. Piping is covered with fiberglass pipe wrap however, thermal insulation system wrapping was identified in the debris piles located throughout the building. The roof reportedly is tar and gravel (access to the roof was not safe so it was not surveyed). No dates were available concerning the age of the roof. Some of the old equipment still remains in the building. Piles of debris are located throughout the building as well as the grounds surrounding the building. Asbestos containing materials are mixed within these piles of debris.

Photographs of the Site are provided in a photograph log in Appendix A.

3.0 LIMITATIONS

As with any other study, this survey is subject to certain limitations. Some of those, which must be considered in interpreting the results of this asbestos survey, are as follows:

- 1. No survey will be able to identify all potentially hazardous materials throughout a facility.
- 2. Ransom was unable to obtain access to the roof due to safety concerns. Samples were collected from parts of the roof which had collapsed into the building. If additional roofing materials (field, flashing and sealants) are identified, they must be presumed as asbestos-containing until sampling can rebut or confirm presumption.
- 3. Debris is located throughout the building and grounds. Ransom attempted to sift through these debris piles, however due to the heterogeneous nature of the piles it is impossible to determine the exact amount of ACM that may be hidden.

4.0 ASBESTOS-CONTAINING MATERIALS SURVEY

4.1 Scope of Work

Ransom conducted an inspection of the Site Building for the presence of asbestos-containing materials (ACM). The survey and sampling was conducted on September 19, 2007. Ransom's EPA-certified asbestos inspector, Ms. Amy Borslien, led the asbestos inspection and sample collection at the Site. Copies of her most recent training certificate and Maine Department of Environmental Protection Asbestos Inspector License are provided in Appendix B.

The scope of the ACM inspection included the identification and quantification of accessible suspect building materials on the building interior and exterior. The analytical method used for bulk sample determination of suspect ACM was polarized light microscopy (PLM) with dispersion staining. Samples were analyzed by Amerisci-Boston (Amerisci) located in Weymouth, Massachusetts. Amerisci is a Maine-licensed asbestos analytical laboratory and is also certified to perform bulk sample analysis by the National Voluntary Laboratory Accreditation Program (NVLAP). Amerisci's certificates are provided in Appendix B.

4.2 Regulatory Framework

The EPA, Occupational Health & Safety Administration (OSHA), and the State of Maine Department of Environmental Protection (ME DEP) are responsible for regulating the release of asbestos into the environment and protecting workers from exposure to airborne asbestos fibers. OSHA defines ACM as "any material containing more than one percent asbestos," while the ME DEP defines ACM as "greater than or equal to one percent asbestos." The EPA and ME DEP are responsible for developing and enforcing regulations necessary to protect the general public from airborne contaminants that are known to be hazardous to human health.

Both OSHA and ME DEP are responsible for the health and safety of workers who may be exposed to ACM in connection with their jobs including asbestos abatement. They both specify requirements for the work practices and engineering controls that must be utilized during asbestos abatement projects. They also require that ACM be repaired, removed, or otherwise appropriately abated before maintenance, renovation, or demolition work disturbs them. OSHA states that thermal system insulation, surfacing materials, and floor tile installed before 1980 must be presumed to be ACM unless appropriate inspection and sampling analysis proves otherwise.

The EPA and ME DEP regulate ACM associated with renovation, demolition, and asbestos abatement projects via the EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) regulation and ME DEP asbestos regulation (Chapter 425 "Asbestos Management Regulations"). These regulations require that buildings be inspected for ACM prior to renovation and/or demolition projects. It stipulates that all friable ACM as well as non-friable ACM that is in poor condition, or could become friable by renovation activity, be removed or otherwise appropriately abated before they are disturbed. For buildings being demolished by large equipment, intact asbestos-containing flooring and roofing may remain in place with approval by the Maine Department of Environmental Protection. Table 4-1 below presents applicable state and federal regulations pertaining to asbestos.

TABLE 4-1: Regulations Pertaining To The Management And Control Of Asbestos

AGENCY	REGULATION
U.S. Environmental Protection Agency	Asbestos Hazard Emergency Response Act (AHERA) - 40 CFR 763
U.S. Environmental Protection Agency	National Emission Standard for Hazardous Air Pollutants (NESHAP) - 40 CFR 61
U.S. Occupational Safety and Health Administration	Asbestos Standard for General Industry - 29 CFR 1910.1001
U.S. Occupational Safety and Health Administration	Asbestos Standard for Construction Industry - 29 CFR 1926,1101
State of Maine	Statutory Sections - Title 38, Chapter 12-A: Asbestos §1271 - §1284
Maine Department of Environmental Protection	Chapter 425 - Asbestos Management Regulations, effective May 29, 2004

4.3 Observations and Findings

Ransom identified and sampled suspect ACM in accessible building areas including common areas, maintenance areas, and mechanical areas. Ransom inspected the Site Building for the presence of ACM in accordance with current EPA and OSHA protocol. During the survey, suspect ACM was identified, sampled, and quantified. A total of 116 bulk samples of suspect ACM were collected from the following building materials as well as five confirmatory samples of known ACM.

Asbestos Cement Board	Textured Composite Board	Cove Mastic (2 Types)
Coving (2 Types)	Composite Board Mastic	Composite Ceiling Tile
2' x 4' Ceiling Tile	Sink Undercoating	Gypsum Wallboard
Joint Compound	1" x 12" Cement Backing	Wood Panel Mastic
Acoustical Board	Gasket Debris	Plaster
Skim Coating	Residual Roofing (2 Types)	Thermal Insulation
Cement Board (2 Types)	Asphaltic Flooring	Roofing Sealant (Interior)
Rolled Roofing Shingle	Concrete Skim Coat	Boiler Bricks
Gloves	Canves	Tar and Gravel Roofing (2 Types)
Roof Membrane	Insulation Debris	Cement Siding
Blown-in Insulation	Light Backing	Electrical Panel Board
Rolled Asphalt Paper	Corrugated Roofing Material	Roofing Paper
Asphalt Roofing Shingles (4 Types	Window Glazing (2 Types)	Canvas Backing
Roofing Sealants	Window Caulk	Paper Board

Laboratory analysis of bulk samples (see Appendix C) found that there was asbestos present in amounts greater than one percent in the materials listed in Table 4-2 below.

TABLE 4-2: Asbestos-Containing Materials

MATERIAL	LOCATION	SAMPLE NUMBER	ASBESTOS QUANTITY AND TYPE
Asbestos Cement Board Panels (Includes double sided window panel and louvers)	2 nd Floor	ASB-01A	25% Chrysotile
Sink Undercoating	2 nd Floor Kitchen	ASB-08	10% Chrysotile
1" x 12" Cement Backing	Debris	ASB-10A	25% Chrysotile
Wood Panel Mastic	2 nd Floor Offices	ASB-11A	20% Chrysotile
Gasket Debris	Debris	ASB-15A	5% Chrysotile
Residual Roofing Material	Loading Dock Grounds	ASB-18A	20% Chrysotile
Residual Roofing Material 2	Loading Dock Grounds	ASB-19A	20% Chrysotile
Cement Board	Debris	ASB-21A	25% Chrysotile
Cloth Gasket	Debris	ASB-22A	65% Chrysotile
Interior Roof Sealant	1 st Floor East	ASB-24A	25% Chrysotile
Cement Board 2	1 st Floor Center Debris	ASB-27A	10% Chrysotile
Gloves	1 st Floor Center	ASB-29A	10% Chrysotile
Interior Cement Siding	1 st Floor West	ASB-34A	25% Chrysotile
Light Backing	1 st Floor Offices	ASB-36A	70% Chrysotile
Black Electrical Panel Board	Throughout	ASB-37A	25% Chrysotile
Corrugated Roofing Material	Exterior	ASB-39A	30% Chrysotile
Canvas Backing	Debris	ASB-46A	70% Chrysotile
Roof Sealant	Concrete Roof	ASB-47A	15% Chrysotile
Roofing Material	Concrete Roof	ASB-48A	40% Chrysotile
Paper Board	Sub-Basement Debris	ASB-51A	60% Chrysotile
Joint Compound	1 st Floor and 2 nd Floor Office Areas	ASB-JWC-	2% Chrysotile
Textured Wall Material	2 nd Floor Stairwell	JWC	2% Chrysotile
12-inch by 12-inch Brown Floor Tile	2 nd Floor office Spaces	ASB-JWC- 4	7% Chrysotile
Mastic associated with 12-inch by 12-inch Brown Floor Tile	2 nd Floor Office Spaces	ASB-JWC- 5	15% Chrysotile
12-inch by 12-inch Black Floor Tile	2 nd Floor Stair Landing	ASB-JWC- 2	5% Chrysotile
Mastic associated with 12-inch by 12-inch Black Floor Tile	2 nd Floor Stair Landing	ASB-JWC-	10% Chrysotile
Window Glazing	Exterior Windows	JWC	5% Chrysotile
Window Caulking	Exterior Windows	JWC	10% Chrysotile

MATERIAL	LOCATION	SAMPLE NUMBER	ASBESTOS QUANTITY AND TYPE
12-inch by 12-inch White Floor Tile	2 nd Floor Office Space	JWC	10% Chrysotile
Mastic associated with 12-inch by 12-inch White Floor Tile	2 nd Floor Office Space	JWC	10% Chrysotile
Textured Ceiling Material	2 nd Floor Office Space	JWC	2% Chrysotile
Window Glazing	Exterior	JWC	2% Chrysotile
Window Glazing- Small Windows	Exterior	JWC	3% Chrysotile

NOTES:

- Sample sets are analyzed until asbestos is identified in an amount greater than one percent. For example, since asbestos was identified in sample ASB-01A at 25 percent, sample ASB-01B was not analyzed.
- Sample numbers JWC indicate that the samples were collected and analyzed by Jacques Whitford Company, Inc. Sample numbers ASB-JWC-1 through ASB-JWC5 are confirmatory samples collected by Ransom.

Photographs of asbestos-containing materials are provided in Appendix A.

Table 4-3 provides estimated quantities of identified ACM.

TABLE 4-3: EstimatedA shestos-Containing Materials Quantities

MATERIAL	LOCATION	ESTIMATED QUANTITY
Interior Ashestos Cement Board Panels (Includes double sided window panel and louvers)	Throughout	2,000 SF
Corrugated Exterior Asbestos Cement Board Siding	Warehouse Portion of Building	7,500 SF
Corrugated Asbestos Board Roofing	Warehouse Portion of Building	6,000 SF
Miscellaneous Exterior Asbestos Cement Board	Exterior - Platform with sloped roof on river side	300 SF
Asbestos Cement Board Debris	Exterior – Perimeter of Building and Grounds	
Sink Undercoating	2 nd Floor Kitchen	1 Each
Debris Including: 1. Gaskets (hard and cloth); 2. Asbestos Cement Board; 3. Gloves; 4. Canvas Backing; and 5. Paperboard	Located throughout building	77-7
Wood Panel Mastic	2 nd Floor Offices	325 SF
Residual Roofing Material	Loading Dock Grounds	يب سه ف
Interior Roof Sealant	1 st Floor East	30 SF
Light Backing	1 st Floor Offices	2 Each

MATERIAL	LOCATION	ESTIMATED QUANTITY	
Black Electrical Panel Board	Throughout	200 SF	
Roof Including: 1. Sealants; 2. Field; and 3. Flashing	Roof	22,000 SF	
Joint Compound	1 st Floor and 2 nd Floor Office Areas	5,000 SF	
Textured Wall Material	2 nd Floor Stairwell	400 SF	
12-inch by 12-inch Brown Floor Tile	2 nd Floor office Spaces	1,700 SF	
Mastic associated with 12-inch by 12-inch Brown Floor Tite	2 nd Floor Office Spaces		
12-inch by 12-inch Black Floor Tile	2 nd Floor Stair Landing		
Mastic associated with 12-inch by 12-inch Black Floor Tile	2 nd Floor Stair Landing	120 SF	
Window Glazing	Exterior Windows	68 Windows	
Window Caulking	Exterior Windows		
12-inch by 12-inch White Floor Tile	2 nd Floor Office Space	!₹*: + :	
Mastic associated with 12-inch by 12-inch White Floor Tile	2 nd Floor Office Space	300 SF	
Textured Ceiling Material	2 nd Floor Office Space	450 SF	

Table 4-4 includes materials that tested negative for asbestos by PLM analytical methods, including the corresponding bulk sample numbers.

TABLE 4-3: Materials Testing Negative for Asbestos

MATERIAL	LOCATION	SAMPLE NUMBER
Textured Composite Board	2 nd Floor	ASB-02A through ASB-02C
Cove Mastic	2 nd Floor	ASB-03A and ASB-03B
Coving	2 nd Floor	ASB-04A and ASB-04B
Composite Board Panel Mastic	2 nd Floor	ASB-05A and ASB-05B
Composite Ceiling Tile	2 nd Floor Kitchen	ASB-06A through ASB-06C
2' x 4' Ceiling Tile	2 nd Floor Near Kitchen	ASB-07A through ASB-07C
Gypsum Wallboard	2 nd Floor	ASB-09A through ASB-09C
Brown Coving	2 nd Floor Offices	ASB-12A and ASB-12B
Cove Mastic	2 nd Floor Offices	ASB-13A and ASB-13B
Acoustical Board	2 nd Floor Large Office	ASB-14A and ASB-14B
Plaster	Loading Dock Debris Pile	ASB-16A through ASB-16G
Skim Coat	Loading Dock Debris Pile	ASB-17A through ASB-17G
Thermal System Insulation	East End	ASB-20A through ASB-20C

MATERIAL	LOCATION	SAMPLE NUMBER
Asphaltic Flooring	1st Floor East	ASB-23A and ASB-23B
Rolled Roofing	1st Floor East	ASB-25A and ASB-25B
Concrete Skim Coat	1st Floor East	ASB-26A through ASB-26G
Boiler Bricks	1st Floor Center	ASB-28A and ASB-28B
Canvas	1st Floor Center	ASB-30A and ASB-30B
Tar and Gravel Roofing	1st Floor Center	ASB-31A through ASB-31C
Roof Membrane	1 st Floor Center	ASB-32A through ASB-32C
Insulation Debris	1 st Floor West	ASB-33A through ASB-33B
Blown-in Insulation	1 st Floor West	ASB-35A through ASB-35E
Rolled Asphalt Paper	Sub Floor	ASB-38A and ASB-38B
Roofing Paper	Exterior	ASB-40A and ASB-40B
Black Shingle	Exterior	ASB-41A and ASB-41B
White Shingle	Exterior	ASB-42A and ASB-42B
Window Glazing	Exterior	ASB-43A and ASB-42B
Green Shingle	Exterior	ASB-44A and ASB-44B
Red Shingle	Exterior	ASB-45A and ASB-45B
Window Glazing	First Floor	ASB-49A and ASB-49B
Window Glaze	First Floor	ASB-50A and ASB-50B

4.4 Conclusions and Recommendations

Asbestos fibers are a potential health hazard when they become airborne. As long as this material remains intact, undamaged, and in good condition, the material may be managed in place. However, current regulations require that asbestos-containing building materials be removed if the materials will be disturbed by demolition activities. ACM identified during this survey that will be impacted by the planned demolition project requires removal prior to the initiation of demolition activities. However if the building is being demolished by large equipment (bulldozers with rakes, top loaders, backhoes, skid loaders/bobcats) then intact asbestos-containing flooring and roofing may remain in place provided that conditions listed by the Maine DEP in Chapter 425 - Asbestos Management Regulations (Section 7B) are met. These requirements include:

- 1. Approval of a non-standard variance by the Maine DEP;
- 2. Using a Maine DEP licensed Asbestos Abatement Contractor;
- 3. A regulated area must be established;
- 4. The project must be conducted in a manner that minimizes the release of asbestos fibers. All necessary and appropriate measures must be taken to ensure that release of asbestos fibers is minimized. The ACM must be kept wet at all times during the demolition, on-site storage, transportation, and disposal activities. If visible emissions are observed during demolition of an area with asbestos-containing materials, work shall cease until engineering controls are in place to prevent such visible emissions;

- 5. Employees within the regulated area must be trained consistent with OSHA 29 CFR Part 1926.1101 (effective August 10, 1994). Training shall be documented, and the training documentation shall be made available immediately to the Department at the work site;
- 6. Employees within the work area must wear appropriate personal protective equipment, including a minimum of a 1/2-faced respirator equipped with HEPA filters and full body coverings, including hand and foot coverings;
- 7. Asbestos waste must be containerized in transport vehicles and securely covered during transport. Waste may be segregated into asbestos waste and non-asbestos waste as needed to meet disposal facility requirements;
- 8. Disposal of asbestos-containing demolition debris must occur at a landfill licensed to accept construction/demolition debris or asbestos waste; and
- 9. A visual evaluation of the regulated area must be performed by a Maine DEP licensed Asbestos Project Monitor prior to releasing the regulated area.

ACM abatement should be performed using approved methods in accordance with applicable regulations established by the EPA, OSHA and the State of Maine. ACM must be removed by a licensed asbestos abatement contractor and in accordance with a project design prepared by a certified Abatement Project Designer.

The State of Maine requires business entities conducting inspections for asbestos containing materials disclose to their clients any business relationships they may have with State of Maine licensed Asbestos Abatement Contractors. Ransom has an independent business relationship with all State of Maine licensed Asbestos Abatement Contractors. A copy of our Asbestos Consultant Independent Business Relationship Disclosure Form is provided in Appendix D.

APPENDIX A

Photograph Log

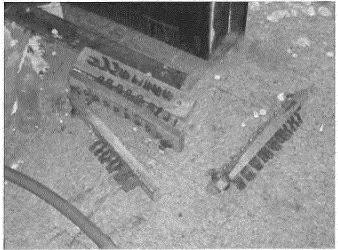
Asbestos Survey Report Former Keddy Mill Building 7 Depot Street Windham, Maine



Asbestos Cement Board ("Transite") ASB-01A - 25% Chrysotile



Sink Undercoat ASB-08A – 10% Chrysotile



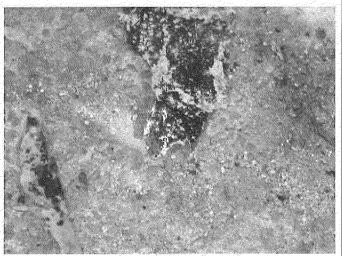
Asbestos Cement Equipment Backing ASB-10A – 25% Chrysotile



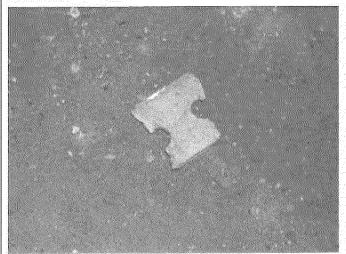
Mastic Behind Paneling ASB-11A – 20% Chrysotile



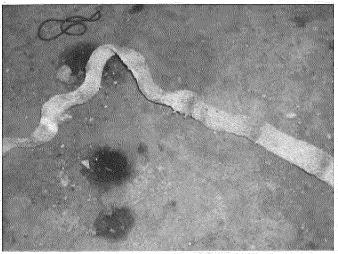
Roofing Debris on Grounds ASB-18A – 20% Chrysotile



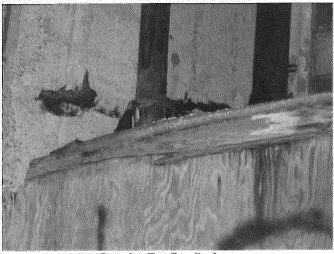
Roofing Debris on Grounds ASB-19A – 20% Chrysotile



Asbestos Cement Debris ASB-21A – 25% Chrysotile



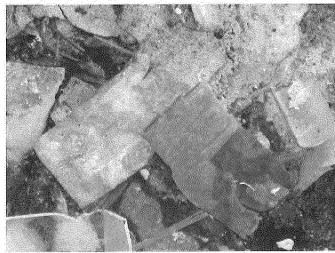
Gasket Material ASB-22A – 65% Chrysotile



Interior Roofing Sealant ASB-24A – 25% Chrysotile



Asbestos Cement Board ASB-27A – 10% Chrysotile



Asbestos-Gloves ASB-29A – 65% Chrysotile



Asbestos Cement Siding ASB-34A – 25% Chrysotile



Electrical Equipment Board ASB-37A – 25% Chrysotile



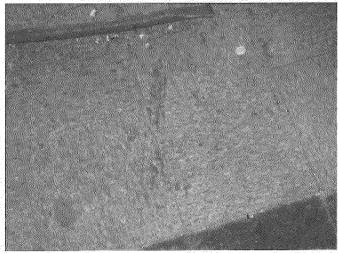
Corrugated Roofing Material ASB-39A – 30% Chrysotile



Canvas Material Associated with TSI ASB-46A – 70% Chrysotile



Textured Paint – Previously Identified ACM (Jacques Whitford Company Inc. – January 2004)



12-inch Floor Tile and Mastic - Previously Identified ACM (Jacques Whitford Company Inc - January 2004)



12-inch Floor Tile and Mastic – Previously Identified ACM (Jacques Whitford Company Inc. – January 2004)



Corrugated Asbestos Cement Board Siding (Jacques Whitford Company Inc – January 2004)



Asbestos Cement Debris on grounds around building



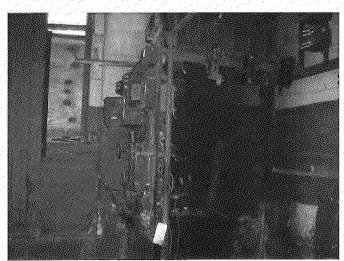
Asbestos Cement Board Located Above Second Row of Windows along exterior Perimeter of Building



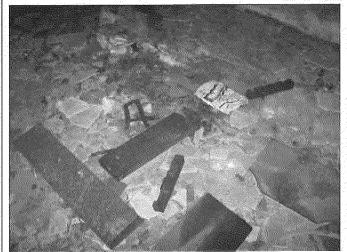
Asbestos Cement Siding and Roofing



Asbestos-Cement Siding Roofing and Corner Trim



Asbestos Electric Panel Backing



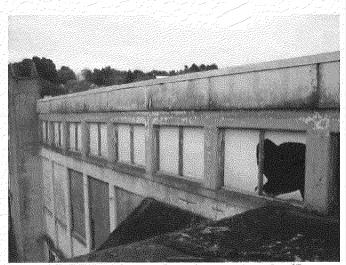
Asbestos Debris (Electric Panel Backing and Asbestos Cement Board) on Floor



Exterior View



Asbestos-containing joint compound (Jacques Whitford Company Inc – January 2004)



Asbestos cement board window panels and soffit



Asbestos-containing roofing ASB-48A – 40% Chrysotile



Asbestos-containing light backing ASB-36A – 70% Chrysotile



Asbestos-containing canvas backing (ASB-46A); Material located in various debris piles throughout



Asbestos-containing canvas backing (ASB-46A); located in

APPENDIX B

Certifications

Asbestos Survey Report Former Keddy Mill Building 7 Depot Street Windham, Maine

APPENDIX C

Laboratory Analytical Reports

Asbestos Survey Report Former Keddy Mill Building 7 Depot Street Windham, Maine

ASBESTOS SURVEY REPORT

Former Industrial Building 7 Depot Street Windham, Maine

Prepared for

Questor, Inc. 50 Monument Square, 2nd floor Portland ME, USA 04101

Prepared by

Jacques Whitford Company, Inc.
75 Pearl Street
Suite 410
Portland, Maine 04101
Phone: (207) 761-7790
Fax: (207) 761-7631

Jacques Whitford Reference: Project No. MEP03102

January 16, 2004

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Appendix B	Chart of ACM (including type, location, amount, condition and content)

Appendix C Glossary of Terms

Appendix D Figures

1.0 Introduction

This limited, asbestos building survey report is being submitted on behalf of:

Questor, Inc. 50 Monument Square, 2nd floor Portland ME, USA 04101

in order to determine the location and approximate quantity of potential asbestos containing materials (ACMs) that are associated with the commercial building located at 7 Depot Street in Windham, Maine, which is reportedly scheduled to be demolished. At the time of the survey, Jacques Whitford Company, Inc. (Jacques Whitford) noted that the roof of the building was deteriorating, and we did not attempt to gain direct access to the roof. Jacques Whitford sampled pieces of the roof that had fallen on the floor in several areas. Jacques Whitford also observed several areas throughout the second floor of the subject property building that contained transite debris, which tested positive for asbestos. Jacques Whitford could not quantify the piles of transite debris, due to the fact that snow was present from the previously mentioned collapsed roof areas.

Qualified personnel conducted the limited asbestos survey following procedures generally accepted and recommended by the United States Environmental Protection Agency (US EPA), the United States Occupational Safety Health Administration (OSHA) and the Maine Department of Environmental Protection (MEDEP). Jacques Whitford collected and had laboratory analysis performed on an adequate number of suspect bulk material samples to ensure accurate results.

The suspect ACMs sampled during the survey of the subject property building, included various 12" x 12" vinyl composite tile (VCT) and associated mastic (tile glue), textured wall material, cove base molding, sheetrock, joint compound, textured ceiling material, various 2' x 4' ceiling tiles, 12" x 12" ceiling tiles, various window glazing, various window caulking, transite boards, exterior corrugated transite panels, interior boiler thermal system insulation (TSI), rolled asphalt roofing shingles, and composite asphalt roofing felts.

Upon sampling and analysis, materials that were found to contain at least 1% asbestos, and are thereby considered asbestos containing, are summarized in Section 4.0 of this survey report.

A licensed asbestos abatement contractor should appropriately abate all of the identified ACMs prior to being disturbed during proposed demolition activities. Jacques Whitford also recommends that the roof of the building be fully inspected and sampled prior to being disturbed during proposed demolition activities, or assumed to be positive for asbestos.

2.0 Bulk Sampling Information

The suspect ACM analyzed, were characterized by bulk samples collected by Brian A. Piccolo (Maine Asbestos Inspector Certification No. AI 0417) on Tuesday, December 16, 2003. Jacques Whitford has made every effort to characterize all visible and readily accessible suspect ACMs within the interior/exterior areas of the subject property building. However, should construction workers encounter and/or need to disturb any product(s) suspected as being ACM, that have not been previously identified or sampled by Jacques Whitford, during any demolition activities in the future, all proper precautions should be taken to ensure these materials are appropriately characterized and handled accordingly.

Inspection procedures included a visual inspection of suspect ACM identified by Jacques Whitford personnel. This visual inspection included the touching of identified suspect ACM to determine its friability, (when dry, may be crushed, pulverized, or reduced to powder by hand pressure), identification of homogeneous areas of identified suspect ACM, approximate quantification of identified suspect ACM, collection of bulk samples for analysis, and assessment of the condition of suspect ACM. The United States Environmental Protection Agency's Managing Asbestos in Place, A Building Owner's Guide to Operations and Maintenance Programs for Asbestos-Containing Materials, was used as a guide for this survey.

Each homogenous area of suspect ACM was assessed to determine the asbestos hazard. A homogeneous area is defined as a material that is uniform in color or texture with a similar appearance and an application on similar components. Factors considered when assessing homogeneous area hazards include the friability of the material, the condition of the material including type, severity, and extent of damage, and accessibility of the material and potential for further damage and disturbance.

Sampling methods were designed to minimize damage to the ACM and subsequent fiber release. Samples were collected using disposable samplers, similar to a cork borer. Samples were extracted to the substrate and ejected into a prelabeled asbestos sample bag. The bag was then sealed, recorded in a sample logbook and sent to the laboratory for analysis. Any remaining debris from the sampling area was cleaned with wet towels, which were discarded into a plastic bag and disposed of properly. Any voids left in the sampled area were filled with Wonder Makers Wonder FillTM Product No.01-8975, to eliminate the possibility of fiber release.

Each of the collected samples were submitted to and analyzed by ProScience Analytical Services, Inc. (ProScience) of Woburn, Massachusetts. ProScience is accredited through the National Voluntary Laboratory Accreditation Program (NVLAP# 200090-0), the American Industrial Hygiene Association (AIHA# 22559) and with the MEDEP (LA-0056). All samples were analyzed in accordance with U.S. Environmental Protection Agency (EPA) recommended protocol ("Follow-up to the Interim Method for Determination of Asbestos in Bulk Insulation Samples" - EPA 600/R-93/116

method "Visual Estimate") using polarized light microscopy (PLM) supplemented by dispersion staining techniques. The Visual Estimate quantitative method is generally used for determining the percentage of asbestos and other components of the sample. The "Point Counting" method may also be used upon client request or at the analyst's discretion. The Point Counting method is usually recommended when the sample contains less than 5% asbestos by Visual Estimate.

It should be noted that instructions were provided to the laboratory to stop at the first positive result obtained for each homogenous suspect material sampled.

Appendix B contains a chain-of-custody and a copy of the bulk sampling results, as provided by ProScience. Appendix C contains a table listing the results of each sample taken, indicating the sample number/type, the approximate quantities present, the condition of the material, and the actual asbestos content or makeup, if any, in each sample analyzed.

3.0 Background Air Sampling

As the scope of this project consisted of an asbestos facility survey only, no background air sampling was conducted during this survey.

4.0 Description of Identified Areas and Suspect Materials

This asbestos building survey has been completed for the proposed demolition of the former industrial building, located at 7 Depot Street in Windham, Maine.

One hundred and four (104) samples amongst twenty-eight (28) different homogenous materials were collected from the subject property building with instructions to the laboratory to stop at the first positive result obtained for each homogeneous material. Based on these instructions, sixty (66) samples were laboratory analyzed.

The following paragraphs contain information regarding the suspect materials observed during the survey that tested positive for asbestos. These paragraphs contain information pertaining to actual locations and estimated quantities.

Samples 5A – 5C: Joint Compound

This material was found to be associated with the sheetrock in the second and third floor office areas of the subject property building. The majority of this material was found to be in good/fair condition. Jacques Whitford personnel did not quantify this material. Based on observations, it is Jacques Whitford's opinion that this material is friable. Jacques Whitford recommends that the joint compound be reanalyzed using more enhanced analytical methods, to insure that the

joint compound is actually asbestos containing. PLM analysis had revealed a 2% chrysotile asbestos concentration.

Samples 6A − 6C: Textured Wall Material

This material was found to be associated with the walls located in the third floor stairwell of the subject property building (see **Figure 1**). The majority of this material was found to be in fair condition. Based on field measurements by Jacques Whitford, there is approximately 385 square feet of this material. Based on observations, it is Jacques Whitford's opinion that this material is friable. Jacques Whitford recommends that the textured wall material be reanalyzed using more enhanced analytical methods, to insure that the textured wall material is actually asbestos containing. PLM analysis had revealed a 2% chrysotile asbestos concentration.

 Samples 7A – 7E & 7AM – 7EM: Brown 12" x 12" Vinyl Asbestos Tile (VAT) and Associated Mastic

These materials were found to cover the floor in the third floor office area of the subject property building (see **Figure 1**). The majority of these materials were found to be in poor condition. Based on field measurements by Jacques Whitford, there is approximately 1,670 square feet of these materials. Based on observations, it is Jacques Whitford's opinion that these materials could be rendered friable with disturbance.

• Samples 8A – 8C: Black 12"x12" VAT

This material was found to cover the floor in the stairwell area on the third floor of the subject property building (see **Figure 1**). The majority of this material was found to be in good/fair condition. Based on field measurements by Jacques Whitford, there is approximately 120 square feet of this material. Based on observations, it is Jacques Whitford's opinion that this material could be rendered friable with disturbance. Jacques Whitford recommends that the black 12" x 12" VAT be reanalyzed using more enhanced analytical methods, to insure that the black 12" x 12" VAT is actually asbestos containing. PLM analysis had revealed a 3% chrysotile asbestos concentration.

Samples 10A – 10C: Parking Lot-side Window Glazing

This material was found to be associated with the parking lot-side windows in the second and third floor office areas within the subject property building. The majority of this material was found to be in good/fair condition. Based on field observations by Jacques Whitford, there is a total of fourteen windows, approximately 1,400 linear feet (~100 lf/window) of this material. Based on observations, it is Jacques Whitford's opinion that material could be rendered friable with disturbance.

Samples 11A – 11C: Parking Lot-side Window Caulking

This material was found to be associated with the parking lot-side windows in the second and third floor office areas within the subject property building. The majority of this material was found to be in good/fair condition. Based on field observations by Jacques Whitford, there is a total of fourteen windows, approximately 322 linear feet (~23 lf/window) of this material. Based on observations, it is Jacques Whitford's opinion that material could be rendered friable with disturbance.

Samples 13A - 13C & 13AM - 13CM: White 12" x 12" VAT and Associated Mastic

These materials were found to cover the floor in one of the second floor office areas of the subject property building (see **Figure 2**). The majority of these materials were found to be in fair condition. Based on field measurements by Jacques Whitford, there is approximately 300 square feet of these materials. Based on observations, it is Jacques Whitford's opinion that these materials could be rendered friable with disturbance.

Samples 14A – 14E: Transite Boards

This material was found to be utilized for walls in areas of the first and second floors of the subject property building, (see Figure 2 and 3). This material was also utilized with the manufacturing process, in the form of a box that was placed into the machines (see Figure 2). It should be noted that transite debris was observed throughout the second floor of the subject property building. The majority of this material was found to be in good/fair condition. Based on field measurements by Jacques Whitford, there is approximately 2,300 square feet of this material. Based on observations, it is Jacques Whitford's opinion that this material could be rendered friable with disturbance.

• Samples 15A – 15C: Textured Ceiling Material

This material was found to be associated with the ceiling located in one of the second floor office areas of the subject property building (see Figure 2). The majority of this material was found to be in fair condition. Based on field measurements by Jacques Whitford, there is approximately 450 square feet of this material. Based on observations, it is Jacques Whitford's opinion that this material is friable. Jacques Whitford recommends that the textured wall material be reanalyzed using more enhanced analytical methods, to insure that the textured wall material is actually asbestos containing. PLM analysis had revealed a 2% chrysotile asbestos concentration.

Samples 17A – 17C: Second Floor Window Glazing

This material was found to be associated with the windows in the manufacturing portion of the second floor within the subject property building. The majority of this material was found to be in good/fair condition. Based on field observations by Jacques Whitford, there is a total of fifty-one windows, approximately 14,688 linear feet (~288 lf/window) of this material. Based on observations, it is Jacques Whitford's opinion that material could be rendered friable with disturbance. Jacques Whitford recommends that the second floor window glazing be reanalyzed using more enhanced analytical methods, to insure that the second floor window glazing is actually asbestos containing. PLM analysis had revealed a 2% chrysotile asbestos concentration.

Samples 20A – 20G; Exterior Corrugated Transite Panel

This material was found to be utilized as the exterior walls and roof of the southeastern warehouse portion of the subject property building (see **Figure 2**). The majority of this material was found to be in good/fair condition. Based on field measurements by Jacques Whitford, there is approximately 10,500 square feet of this material. Based on observations, it is Jacques Whitford's opinion that this material could be rendered friable with disturbance.

Samples 24A – 24C: First Floor/Basement Small Wood Framed Window Glazing

This material was found to be associated with the small wood framed windows located in the air circulator room of the first floor/basement of the subject property building. The majority of this material was found to be in good/fair condition. Based on field observations by Jacques Whitford, there is a total of three windows, approximately 192 linear feet (~64 lf/window) of this material. Based on observations, it is Jacques Whitford's opinion that material could be

rendered friable with disturbance. Jacques Whitford recommends that the small wood framed window glazing be reanalyzed using more enhanced analytical methods, to insure that the small wood framed window glazing is actually asbestos containing. PLM analysis had revealed a 3% chrysotile asbestos concentration.

5.0 Summary/Conclusions

Jacques Whitford has completed an asbestos building survey for the commercial building located at 7 Depot Street in Windham, Maine, which is reportedly scheduled to be demolished. It should be noted that at the time of the survey, Jacques Whitford noted that the roof of the building was deteriorating in several areas. Therefore the roofing materials of the building were not inspected or sampled at this time. However, Jacques Whitford did observe large pieces of the roof in several areas where the roof had collapsed. As such, at the clients request, this material was sampled to determine if this material was asbestos containing. It should also be noted that at the time of the survey, Jacques Whitford observed several areas throughout the second floor of the subject property building to have transite debris, which tested positive for asbestos. Jacques Whitford could not quantify the piles of transite debris, due to the fact that snow present from the previously mentioned collapsed roof areas.

One hundred and four (104) samples amongst twenty-eight (28) different homogenous materials were sampled and submitted for laboratory analysis. Suspect ACMs sampled during the survey of the subject property building, included various 12" x 12" VCT and associated mastic (tile glue), textured wall material, cove base molding, sheetrock, joint compound, textured ceiling material, various 2" x 4" ceiling tiles, 12" x 12" Ceiling tiles, various window glazing, various window caulking, transite boards, exterior corrugated transite panels, interior boiler thermal system insulation (TSI), rolled asphalt roofing shingle, and composite asphalt roofing felts.

Various ACMs were identified in this survey, as summarized in Section 4.0 of this report. Each of these identified ACMs should be appropriately abated by a licensed asbestos abatement contractor prior to being disturbed during proposed demolition activities. Jacques Whitford also recommends that the roof of the building be fully inspected and sampled prior to being disturbed during proposed demolition activities, or assumed to be positive for asbestos.

Jacques Whitford has made every effort to characterize all visible and readily accessible suspect ACMs within the interior/exterior areas of the subject property building. However, should construction workers encounter and/or need to disturb any product(s) suspected as being ACM, that have not been previously identified or sampled by Jacques Whitford, during any demolition activities in the future, all proper precautions should be taken to ensure these materials are appropriately characterized and handled accordingly. It should be noted that the roof of the building was deteriorating in several areas.

Therefore the roofing materials of the building were not inspected or sampled at the time of this survey. However, Jacques Whitford did observe large pieces of the roof in several areas where the roof had collapsed. As such, at the clients request, this material was sampled to determine if this material was asbestos containing.

APPENDIX A

Bulk Sampling Results

APPENDIX B

Charts of ACM Results

Sample # /Description	Material Location	Approximate Quantity	Observed Condition	Total Asbestos Content/Make-up
1A White 12" x 12" Ceiling Tile	NA	NA	NA	Sample negative for ACM. Sample content: 90% Cellulose 10% Non-Fibrous
1B White 12" x 12" Ceiling Tile	NA	NA	ŇA	Sample negative for ACM. <u>Sample content:</u> 90% Cellulose 10% Non-Fibrous
1C White 12" x 12" Ceiling Tile	NA	NA	NA	Sample negative for ACM. Sample content: 90% Cellulose 10% Non-Fibrous
2A 2' x 4' Worm Pattern Ceiling Tile	NA	NA	NA	Sample negative for ACM. Sample content: 45% Mineral Wool 45% Cellulose 10% Non-Fibrous
2B 2' x 4' Worm Pattern Ceiling Tile	NA	NA	NA	Sample negative for ACM. Sample content: 45% Mineral Wool 45% Cellulose 10% Non-Fibrous
2C 2' x 4' Worm Pattern Ceiling Tile	NA	NA	NA	Sample negative for ACM. Sample content: 45% Mineral Wool 45% Cellulose 10% Non-Fibrous
2D 2' x 4' Worm Pattern Ceiling Tile	NA	NA	NA	Sample negative for ACM. Sample content: 45% Mineral Wool 45% Cellulose 10% Non-Fibrous
2E 2' x 4' Worm Pattern Ceiling Tile	NA	NA	'NA.	Sample negative for ACM. Sample content: 45% Mineral Wool 45% Cellulose 10% Non-Fibrous
3A Solid White 2' x 2' Ceiling Tile	NA	NA	NA	Sample negative for ACM. Sample content: 90% Cellulose 10% Non-Fibrous

Sample # /Description	Material Location	Approximate Quantity	Observed Condition	Total Asbestos Content/Make-up
3B Solid White 2' x 2' Ceiling Tile	NA	NA	NA	Sample negative for ACM. <u>Sample content:</u> • 90% Cellulose • 10% Non-Fibrous
3C Solid White 2' x 2' Ceiling Tile	NA	NA	NA	Sample negative for ACM. Sample content: 90% Cellulose 10% Non-Fibrous
4A Sheetrock	NA	NA	NA	Sample negative for ACM. Sample content: 20% Cellulose 80% Non-Fibrous
4B Sheetrock	NA	NA	NA	Sample negative for ACM. Sample content: 20% Cellulose 80% Non-Fibrous
4C Sheetrock	NA	NA	NA	Sample negative for ACM. Sample content: 20% Cellulose 80% Non-Fibrous
4D Sheetrock	NA	NA	NA	Sample negative for ACM. Sample content: 20% Cellulose 80% Non-Fibrous
4E Sheetrock	NA	NA	NA	Sample negative for ACM. Sample content: 20% Cellulose 80% Non-Fibrous
4F Sheetrock	NA	NA	NA	Sample negative for ACM. Sample content: 20% Cellulose 80% Non-Fibrous
4G Sheetrock	NA	NA	NA	Sample negative for ACM. Sample content: 20% Cellulose 80% Non-Fibrous
5A-5C Joint Compound	2 nd and 3 rd Floor Office Areas	Not Quantified	Good/Fair	Sample positive for ACM. Sample content: 2% Chrysotile 98% Non-Fibrous
6A-6C Textured Wall Material	3 rd Floor Stairwell	~385 sq ft	Fair	Sample positive for ACM. Sample content: 2% Chrysotile 98% Non-Fibrous
7A-7E Brown 12" x 12" VAT	3 rd Floor Office Area	~1,670 sq ft	Poor	Sample positive for ACM. Sample content: 3% Chrysotile 97% Non-Fibrous
7AM-7EM Mastic	3 rd Floor Office Area	~1,670 sq ft	Poor	Sample positive for ACM. Sample content: 10% Chrysotile 90% Non-Fibrous

Sample # /Description	Material Location	Approximate Quantity	Observed Condition	Total Asbestos Content/Make-up
8A-7C Black 12" x 12" VAT	3 rd Floor Office Area	~120 sq ft	Good/Fair	Sample positive for ACM. Sample content: 3% Chrysotile 97% Non-Fibrous
8AM Mastic	NA	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous
8BM Mastic	NA	NA	NA.	Sample negative for ACM, Sample content: 100% Non-Fibrous
8CM Mastic	NA	NA	NA	Sample negative for ACM. Sample content: 2% Cellulose 98% Non-Fibrous
9A Cove Base Molding	NA	NA	NA	Sample negative for ACM. <u>Sample content:</u> • 100% Non-Fibrous
9AM Mastic	NA	NA	NA	Sample negative for ACM, Sample content: 2% Cellulose 98% Non-Fibrous
9B Cove Base Molding	NA	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous
9BM Mastic	NA	NA	NA.	Sample negative for ACM, Sample content; 2% Cellulose 98% Non-Fibrous
9C Cove Base Molding	NA	NA	NA.	Sample negative for ACM. Sample content: 100% Non-Fibrous
9CM Mastic	NA	NA	NA	Sample negative for ACM, Sample content: 2% Cellulose 98% Non-Fibrous
10A-10C Parking-side Window Glazing	2 nd and 3 rd Floor Office Areas	14 Windows (~100 lf/window)	Good/Fair	Sample positive for ACM. Sample content: 5% Chrysotile 95% Non-Fibrous
11A-11C Parking-side Window Caulking	2 ^{ad} and 3 rd Floor Office Areas	14 Windows (~23 lf/window)	Good/Fair	Sample positive for ACM. Sample content: 10% Chrysotile 90% Non-Fibrous
12A River-side Window Caulking	NA	NA	NA	Sample negative for ACM. Sample content: • 100% Non-Fibrous
12B River-side Window Caulking	NA	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous

Sample # /Description	Material Location	Approximate Quantity	Observed Condition	Total Asbestos Content/Make-up
17A-17C 2 nd Floor Window Glazing	2 nd Floor Manufacturing Area	~51 Windows (~288 lf/window)	Good/Fair	Sample positive for ACM. Sample content: 2% Chrysotile 98% Non-Fibrous
18A Rolled Asphalt Roofing Shingle	NA	NA	NA	Sample negative for ACM, Sample content: 45% Cellulose 55% Non-Fibrous
18B Rolled Asphalt Roofing Shingle	NA	NA	NA	Sample negative for ACM, Sample content: 50% Cellulose Non-Fibrous
18C Rolled Asphalt Roofing Shingle	NA	NA	NA	Sample negative for ACM, Sample content: 50% Cellulose 50% Non-Fibrous
19A Interior Boiler TSI	NA	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous
19B Interior Boiler TSI	NA	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous
19C Interior Boiler TSI	NA	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous
20A-20G Exterior Corrugated Transite Panels	Southeastern Warehouse portion of the Building	~10,500 sq ft	Good/Fair	Sample positive for ACM. Sample content: 30% Chrysotile 70% Non-Fibrous
21A Red Window Glazing 1 st Floor/Basement Windows	NA	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous
21B Red Window Glazing 1 st Floor/Basement Windows	NA	NA	NA.	Sample negative for ACM. Sample content: 100% Non-Fibrous
21C Red Window Glazing 1st Floor/Basement Windows	NA	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous
22A 1 st Floor/Basement Metal Framed Window Glazing	NA	NA	NA	Sample negative for ACM. Sample content: 10% Other 90% Non-Fibrous
22B I st Floor/Basement Metal Framed Window Glazing	NA	NA	NA	Sample negative for ACM. Sample content: • 5% Other • 95% Non-Fibrous

Sample # /Description	Material Location	Approximate Quantity	Observed Condition	Total Asbestos Content/Make-up
22C 1 st Floor/Basement Metal Framed Window Glazing	NA	NA	NA	Sample negative for ACM. Sample content: 5% Other 95% Non-Fibrous
23A I st Floor/Basement Large Wood Framed Window Glazing	NA.	NA	NA	Sample negative for ACM. <u>Sample content:</u> • 100% Non-Fibrous
23B 1 st Floor/Basement Large Wood Framed Window Glazing	NA	NA	NA	Sample negative for ACM. <u>Sample content:</u> • 100% Non-Fibrous
23C 1 st Floor/Basement Large Wood Framed Window Glazing	NÁ	NA	NA	Sample negative for ACM. Sample content: 100% Non-Fibrous
24A-24C 1 st Floor/Basement Small Wood Framed Window Glazing	1st Floor/Basement Air Circulator Room	~3 Windows (~64 lf/window)	Good/Fair	Sample positive for ACM, Sample content; 3% Chrysotile 97% Non-Fibrous

NA - Not Applicable sq ft - Square Feet lf - Linear Feet

APPENDIX C

Glossary of Terms

ACM – An abbreviation for the term Asbestos Containing Material. Asbestos containing material is defined as any product, which contains more than one percent (1%) asbestos.

Amosite -- An asbestiform of the amphibole group, containing approximately 50% silica and 40% iron (II) oxide, and is made up of straight, brittle fibers, light gray to pale brown in color. It is often called "brown" asbestos.

Asbestos -- A generic name given to a number of naturally occurring hydrated mineral silicates that possess a unique crystalline structure, and are incombustive in air, and are, separable into filaments.

Asbestos Abatement – Procedures to control fiber release from asbestos-containing materials in buildings or to remove it entirely.

Asbestos Control – Minimizing the generation of airborne asbestos fibers until a permanent solution is developed (removal).

Asbestos Fibers – Fibers with a length to width ratio of 3:1 or more, generated from an asbestos-containing material.

Breeching – A duct, which transports combustion, gases from a boiler or heater to a chimney or stack.

Chrysotile – The only asbestiform of the serpentine variety, which contains approximately 40% each of silica and magnesium oxide. It is the most common form of asbestos, and is often called "white" asbestos.

Crocidolite – An asbestiform of the amphibole variety containing approximately 50% combined silica and nearly 40% of combined iron II and iron III. It is often called "blue" asbestos.

Electron Microscopy – A method of asbestos sample analysis, which utilizes an electron, beam to differentiate between fibers.

Encapsulation – The coating of ACM with a bonding or sealing agent to reduce or prevent the release of airborne fibers.

Enclosure – A resilient structure, built (or sprayed) around ACM designed to prevent disturbed to prevent disturbance and contain released fibers.

Friable Asbestos – Any material that contains 1% or more of asbestos by weight, volume or area percentage and can be crumbled, pulverized or reduced to powder when dry by hand pressure.

Homogenous Areas — An area, which appears similar throughout in terms of color, texture and date of material application.

Operations & Maintenance Plan (O & M) -- Specific procedures and practices developed for the interim control of asbestos-containing materials in buildings until it is removed.

Phase Contrast Microscopy (PCM) – a microscopic technique used for counting of fibers in air samples, but which does not distinguish fiber types.

Pipe Lagging - The insulation or wrapping around a pipe.

Polarized Light Microscopy (PLM) – A microscopic technique used to distinguish between different types of asbestos fibers by their shape and unique optical properties. It is utilized in bulk sampling identification.

Substrate - The material or existing surface to which the asbestos containing material is attached or applied.

Surfactant – A chemical wetting agent added to water to improve its ability to penetrate asbestos containing material by reducing the surface tension of the water.

Visual Inspection – A visual, walk through inspection of the work area to detect incomplete work, damage or inadequate clean up of a work site.

Wet Cleaning – The process of eliminating asbestos contamination from surfaces and objects by using cloths, mops or other cleaning tools that have been dampened with amended water.

APPENDIX D

Figures



COPY

Civil Engineers & Land Surveyors

June 12, 2007

Project 064006-02

Lee D. Allen, P.E. Northeast Civil Solutions 153 U.S. Route 1 Scarborough, Maine 04074

RE: Structural Condition Investigation

HRC Village at Little Falls, LLC

South Windham, Maine

Dear Lee:

Oak Engineers, LLC. (Oak) has completed structural condition investigation of the existing power plant and abandoned mill building foundations at the above site in accordance with our agreement dated March 12, 2007. The purpose of this investigation is to assess existing conditions and determine viable options for installing a retaining wall adjacent to the power plant property, which is currently owned and operated by Sappi. We understand that the proposed retaining wall must support the adjacent property without removing any of the existing back fill materials or disturbing the structure.

SCOPE OF INVESTIGATION

The investigation included the following tasks:

- 1. A site visit was conducted on February 8, 2006, and on March 29, 2007, by engineers from Oak to visually observe structural conditions of the mill building foundations and adjacent Sappi power plant. Mr. Tom Howard of Sappi provided access to the existing power plant during the March 2007 visit and provided general information regarding the power plant building's construction.
- 2. During the March visit, a dimensional survey of important building components and surrounding grades was conducted by Oak.
- 3. Existing conditions plan and section of the mill building and adjacent property was developed based on the field survey and information provided by Sappi (see Attachment)
- An engineer evaluated existing structural conditions as well as subsurface information provided in a geotechnical report previously provided by Oak (report dated February 27, 2007) with respect to the proposed construction plans by Northeast Civil Solutions, Inc. (NCS).

www.oakengineers.com

Lee D. Allen, P.E. Northeast Civil Solutions

5. Recommendations for design and construction of a retaining wall adjacent to the Sappi property and along the river were developed.

EXISTING CONDITIONS

Mill Building

The abandoned mill building is generally constructed of reinforced concrete columns, beams, and exterior walls, with either flat slab or ribbed floor construction. The south basement wall that is parallel to the river consists of 12-inch-thick concrete wall approximately 8 feet in height above the basement level floor slab and supports the exterior brick masonry walls extending three levels above the basement floor. It appears that the basement wall adjacent to the river is supported on concrete piers spaced approximately 25 feet apart.

The basement wall located at the west end of the building consists of approximately 48-inch-thick stone masonry wall extending approximately 8 feet above the elevated basement floor. Above the stone masonry, the wall is constructed of approximately 40-inch-thick brick masonry to the first-floor level. It appears that the upper brick masonry wall was originally above grade since large areas were blocked with concrete masonry units where windows once existed.

Water flows through open brick culverts (possibly penstocks) from the power plant property on the west side of the mill building and beneath the elevated structural floor slab in the basement. The water is directed and channeled through a system of concrete holding tanks and conduits beneath the slab and returns to the river beneath the building foundations on the south wall adjacent to the river.

Minor cracking or deterioration was observed in the south basement wall. The west basement wall appears to be stable at the stone masonry base. However, some buckling, patching, and localized structural failure was noted in the upper brick masonry wall.

The concrete walls, columns, and floors were sounded with sledge hammer in several locations and appeared to be sound.

Power Plant

The adjacent power plant building is constructed of cast-in-place concrete foundations and floor slabs with steel-framed and masonry superstructure. The powerhouse has three separate floor levels with elevations noted in the attached sketch provided by Sappi. The power house is connected to the existing mill building with a stone masonry foundation wall and upper concrete wall. There is a large opening in the stone masonry foundation wall approximately 4 feet wide by 8 feet high which provides access from the mill building to the tailrace area of the power plant.

The building appears to be is good condition and no significant damage was noted during our brief visit.

Lee D. Allen, P.E. Northeast Civil Solutions

CONCLUSIONS

Based on the information obtained from this investigation, the following opinions regarding structural condition and the proposed construction are rendered:

- The existing power plant structure is not rigidly connected or attached to the mill building. Therefore, the proposed construction of a retaining wall should not disturb the existing structures.
- The mill building's basement wall adjoining the two properties is in poor condition.
- The existing open culverts beneath the mill building foundation wall are hydraulically connected to river flow.

RECOMMENDATIONS

Constructing the proposed retaining wall adjacent to the power plant is considered feasible; however, we recommend the following precautionary measures:

- Due to the poor condition of the existing basement wall adjoining the two properties, the
 existing wall should remain in place and be properly braced throughout construction of
 the proposed wall.
- The existing underground brick conduits must be either blocked in place or otherwise rerouted through the proposed wall. Further investigation of the implications of blocking
 these hydraulic structures is recommended, if blocking is the preferred alternative.

The following options were considered viable approaches for constructing the proposed retaining structure:

- 1. Soldier pile wall with lagging.
- 2. Rigid concrete retaining wall.

The first option would require steel H-piles spaced approximately 6 feet on center and socketed into sound bedrock. Additionally, the finished wall would most likely require either tie-backs or struts due to the proposed retained height and apparent depth to bedrock. Tie-backs would extend into the adjacent property and require anchorage into the bedrock, and therefore are not feasible for this project. Struts would require steel supports extending into the river bank and were considered to be costly and unsightly. Therefore, due to costs and aesthetics, we considered this option to be no longer feasible.

We recommend that the proposed retaining wall consist of reinforced concrete stem and foundation supported on micro-piles socketed into the bedrock. We believe micro-piles will provide adequate tensile

Lee D. Allen, P.E. Northeast Civil Solutions

and compressive strength for the proposed wall foundations and, due to the wall's rigidity, tie-backs or struts will not be required.

CLOSURE

This report has been prepared to assist in the design and construction of an earth retaining wall structure as part of the Village at Little Falls development in, South Windham, Maine. The recommendations have been presented on the basis of an understanding of the project as described herein, and through the application of generally accepted foundation engineering practices. No other warranties, expressed or implied, are made.

We thank you for the opportunity to provide structural engineering services to assist in developing plans for this project. Please call me if you have any questions regarding this report or need any further assistance. We will proceed with developing design plans and details for Option 2 above and according to our agreement unless you provide direction otherwise.

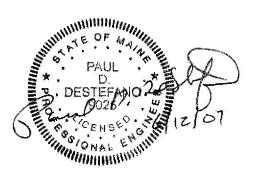
Sincerely,

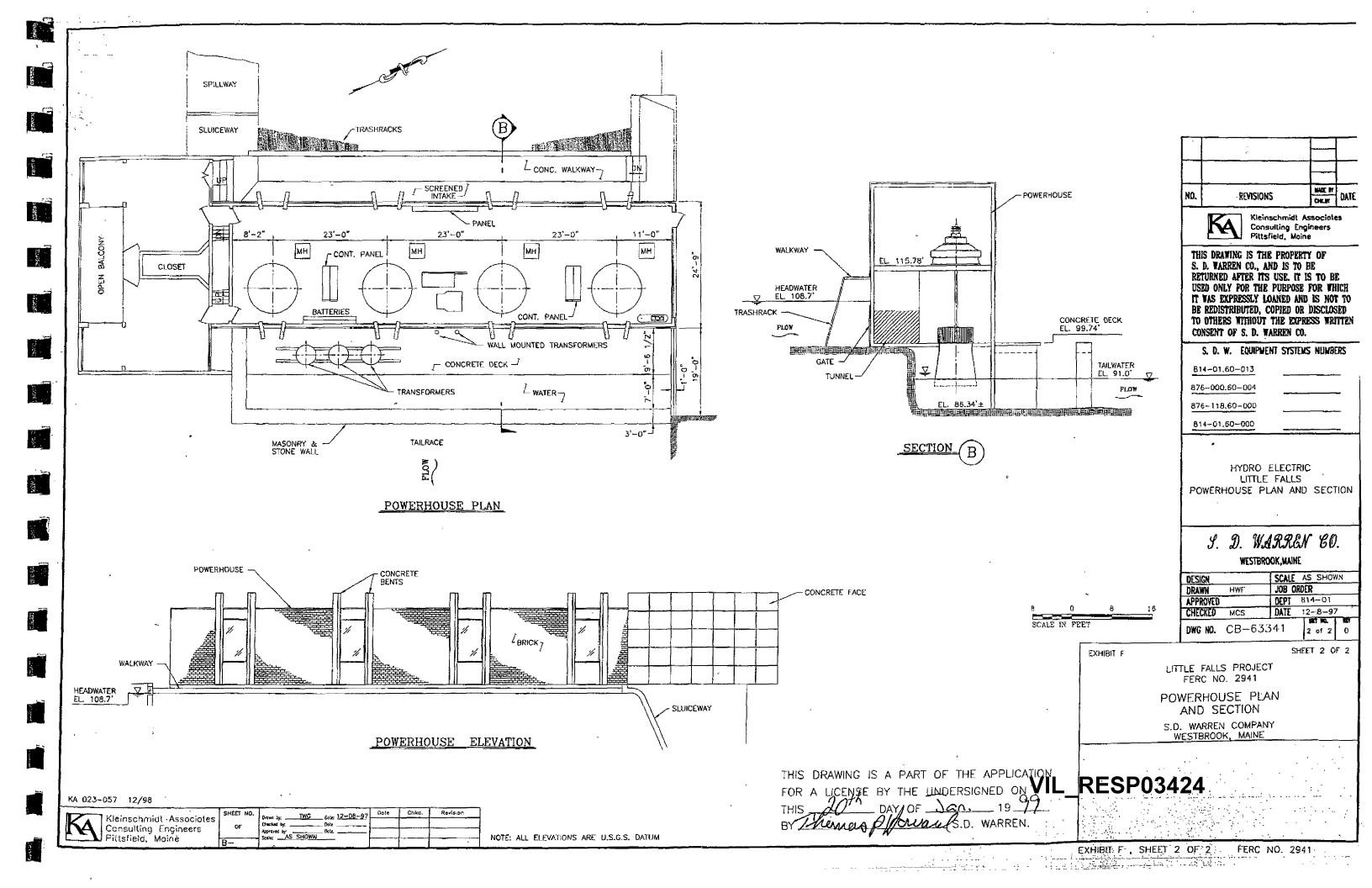
OAK ENGINEERS, LLC.

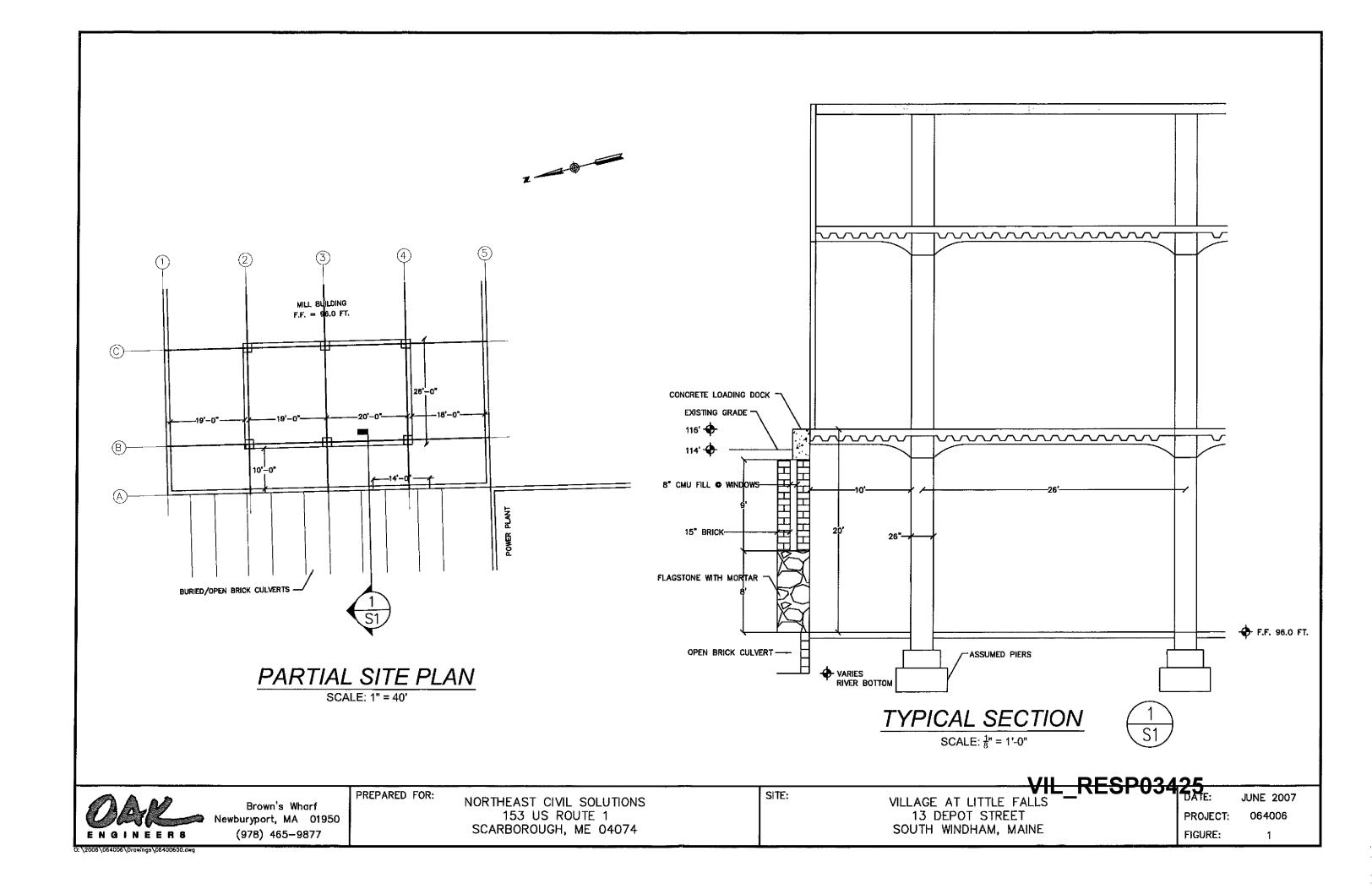
Paul D. DeStefano, Ph.D., P.E. Director, Geotechnical and Structural Services

PDD:sh Attachments

cc: Steve Etzel, Questor, Inc. S. D. Warren Company







PO Box 1237 15 Shaker Rd. Gray, ME 04039

Traffic and Civil Engineering Services

207-657-6910 FAX: 207-657-6912 E-Mail:mail:box@gorrillpalmer.com

July 5, 2007

Mr. Brooks More, AICP Director of Planning Town of Windham 8 School Street Windham, ME 04062



Subject:

Village at Little Falls

Stormwater Management, Traffic and General Engineering Peer Review

Dear Brooks,

As requested by your office, Gorrill-Palmer Consulting Engineers Inc. has conducted a peer review of the stormwater management, traffic and general civil engineering design aspects of the above referenced project. Our review has focused on:

- * Whether the project appears to conform to standard engineering practice, and any revisions which may be desirable.
- Whether the project appears to conform to the requirements of the Town of Windham Zoning, Subdivision and Surface Water Protection Ordinances, and any revisions which may be desirable.

Information provided to Gorrill-Palmer Consulting Engineers Inc., as prepared by Northeast Civil Solutions, Inc. (NCS) includes:

- Preliminary Subdivision Application & Final Site Plan Application, Village at Little Falls, June 2007
- Village at Little Falls Plan Set, stamped "Preliminary Review 6-1-07"
- ❖ Subdivision/Site Plan Pre-Application, dated March 2007

Gorrill-Palmer's review of the application materials was limited to stormwater management, general engineering and traffic elements. Gorrill-Palmer's review specifically excluded the Voluntary Response Action Plan (VRAP), geotechnical report, condominium documents (except as related to site and stormwater management system maintenance), and Conditional Letter of Map Revision based on Fill (CLOMR-F). Gorrill-Palmer did not conduct a detailed review of water and sewer plans and details because we understand that Portland Water District (PWD) will review and approve the water and sewer plans.

Conformance to Standard Engineering Practice

The analysis conducted by NCS utilized the methodology outlined in "Urban Hydrology for Small Watersheds, Technical Release 55 (TR55), USDA, Soil Conservation Service for calculation of watershed area, curve number, and time of concentration. NCS utilized the HydroCAD Stormwater Modeling Program, which is based upon the routing methodology contained within Technical Release No. 20, USDA, Soil Conservation Service. The use of these programs is in keeping with the standard engineering practices within the State of Maine.

Mr. Brooks More July 5, 2007 Page 2 of 8

Stormwater Management Plan Review

Gorrill-Palmer reviewed the stormwater management report and plans and spot-checked the calculations. We present the following comments for your consideration and response as appropriate:

General Comments:

- 1. Since the development includes more than 3.0 acres of impervious area, it requires a Site Location of Development Act (SLDA) permit from the Maine DEP. The project is subject to the MDEP Stormwater Management Law (effective November 2005) and is required to meet Basic Standards and General Standards as defined in the Law. We understand that MDEP has agreed with the applicant that the MDEP Flooding Standard is not applicable to this project, due to direct discharge of stormwater to the Presumpscot River and the presumption of no significant impact on peak flows downstream of the site. Stormwater detention facilities to control peak rates of runoff from the development are therefore not required. Gorrill-Palmer has not reviewed the project for conformance to the MDEP Stormwater Management Law, nor for conformance with SLDA requirements.
- 2. The development proposes to use an underground detention and soil filter (StormTech) system and bioretention cells to provide water quality treatment required by MDEP Stormwater Law standards.

Stormwater Management Report:

- 3. Appendix B The stormwater report shows an offsite drainage area of +/- 6.3 acres that presently drains into an existing culvert under the railroad tracks and flows across the property to the Presumpscot River. This drainage area includes High Street, several houses and open areas. This area appears to measure approximately 7.5 acres from the map provided in the report. The size of this drainage area should be confirmed using 1"=2000' scale USGS topographic maps.
- 4. Appendix I The maintenance contract with Clean Harbors should specify that all components of the proposed stormwater management system will be maintained in accordance with the maintenance plan approved by the Maine DEP. The contract should also specify that the StormTech detention/filter system will be maintained in accordance with the Manufacturer's recommended maintenance plan.
- 5. Appendix L The condominium association documents, Article 8, Section 8.2, should specify that Portland Water District will maintain the sewage pump station and sewer system, if that is the intent of the applicant.
- 6. Appendix L Provisions i thru vi relating to stormwater management system maintenance should be revised to include maintenance of bioretention cells and maintenance of the StormTech detention/filter system in accordance with the manufacturer's recommended maintenance plan.

Exhibit 14, Conformance with Town Site Plan Requirements

7. Section F on page 2 states that "stormwater will be detained onsite in order to reduce stormwater discharge to rates less than predevelopment flows." A similar statement also appears on page 1 of Exhibit 18, Community Facilities Impact. These statements should be revised to indicate that increased site runoff is not anticipated to increase peak flow rates in the Presumpscot River.

Underground Detention/Filter System:

8. Gorrill-Palmer did not conduct a detailed review of the detention/filter system design. We assume that NCS will coordinate design details with the StormTech manufacturer's representative and that MDEP will review the design for conformance with MDEP Stormwater Law Standards.

Mr. Brooks More July 5, 2007 Page 3 of 8

- 9. The plans show the offsite area noted in the comment #3 draining into the proposed storm drainage system for the development, and flowing into the proposed detention/filter system. The stormwater calculations indicate that sizing of the detention/filter system is based on the proposed impervious and landscaped areas within the development, not including the offsite area. The applicant should request MDEP to confirm that the detention/filter system is appropriately sized to handle both onsite and offsite runoff as proposed.
- 10. Depending on MDEP confirmation of the detention/filter system sizing as noted in the previous comment, NCS may need to consider either bypassing the offsite flows around the system, or other modifications to the proposed design.
- 11. If the offsite drainage area is directed to the detention/filter system as designed, the plans should include sediment pretreatment measures for this offsite flow.
- 12. The plans appear to use catch basins with 3-foot deep sumps and hoods for sediment pretreatment of stormwater flows to the detention/filter system. NCS should provide sediment volume calculations based on MDEP requirements and confirm that adequate sediment storage volume is provided.

Plan Set Review

General Comments:

- 13. Notes referring to the Depot Street reconstruction plans should be added to each of the Grading and Drainage Plan, Site Plan, and Utility Plan sheets bordering Depot Street. Limits of construction, pavement sawcut locations, grading, utilities, drainage systems and other construction should be coordinated with the Depot Street Improvement plans. If the Depot Street Improvement Project may be constructed under a separate contract, the plans should contain specific information and notes to coordinate Depot Street construction with onsite construction.
- 14. Plans should include trench cap details conforming to Town and MDOT requirements for all proposed utility construction within Route 202 and Depot Street.

Sheet 2 of 38, Existing Conditions Plan:

- 15. The plan should be stamped by a surveyor licensed in Maine.
- 16. Abutting properties across Depot Street and the railroad ROW should be shown on this plan and the preliminary subdivision plan.

Sheet 3 of 38, Preliminary Subdivision Plan:

- 17. All State and Federal permits applicable to the project should be noted on the subdivision plan.
- 18. A note referring to the Conditional Letter of Map Amendment based on Fill (CLOMR-F), as approved by FEMA, should be included on the plan.
- 19. The source of the boundary survey should be clearly noted on the plan.
- 20. Note 20 should be revised when the Phase II archaeological survey has been completed.
- 21. The plan shows a "proposed 20' grading easement" within the existing railroad tracks on the east side of the project. The applicant should provide documentation that this easement has been approved by MDOT, and the Railroad if applicable.
- 22. Gorrill-Palmer assumes that a condominium plat plan suitable for recording at the Cumberland County Registry of Deeds will be submitted with the final subdivision application.

Mr. Brooks More July 5, 2007 Page 4 of 8

Sheet 4 of 38, Demolition Plan

- 23. This plan should include notes referring to fill requirements and other applicable provisions of the project geotechnical report.
- 24. A plan, details and specifications for the preload area should be provided.
- 25. A demolition-phase erosion control plan should be included in the plan set, showing required erosion control measures as stated in Note 3 on this plan.
- 26. Site access locations for demolition operations should be shown on the plan.
- 27. Note 4 states that "site cleanup and demolition must be limited to the parcel owned by HRC..." The plan should include appropriate easements relating to any work outside the site boundaries, specifically any work in the Railroad ROW (as shown on the Grading Plans, Sheets 7 and 8 of 38), and removal of the existing building that straddles the property line at the northeast corner of the site.
- 28. The existing railroad tracks abutting the site should be shown on the plan.

Sheet 6 of 38, Grading & Drainage Plan - Sheet 2

- 29. Grading at the proposed curb line along the south side of Depot Street does not show the 6" curb reveal.
- 30. Guardrail should be provided at the paved apron on the west side of the pump station generator building adjacent to the riverbank slope.
- 31. Note 7 refers to the Geotechnical Report by Oak Engineers dated February 27, 2007. The plan set and contract documents should clearly specify the contractor's responsibility to complete construction in accordance with the Geotechnical Report, as determined appropriate by NCS.
- 32. The riverbank restoration slope appears to be in the range of 1.7H:1V to 2H:1V. These slopes are proposed to be stabilized with erosion control blanket and plantings. The geotechnical report, page 14 (Fill and Backfill section) states that permanent slopes steeper than 2H:1V should be stabilized with riprap, and that river banks should not exceed 2H:1V. The applicant should submit slope stability calculations for the proposed riverbank slopes.
- 33. Proposed storm drains are located within 4 to 8 feet of units 17, 18 and 19, with the proposed storm drain approximately 9 feet below proposed finish floor. There appear to be similar proposed conditions at other locations within the development. NCS should confirm that proposed pipe materials are suitable for installation at locations close to foundations where the proposed pipe may be located within the soil support zone below the proposed building foundations. Future storm drain maintenance implications should also be considered.

Sheet 7 of 38, Grading & Drainage Plan - Sheet 3

34. The plan should include a note referring to the Depot Street Improvement Project, as on Sheet 6.

Sheet 8 of 38, Grading & Drainage Plan - Sheet 4

- 35. The plan shows a stabilized area (loam & seed over gravel) to access the DETENTION/FILTER system for maintenance. The Landscape Plan (L1) shows two proposed trees that appear to be within the access area. The access area should be kept clear of landscaping and other obstructions.
- 36. The proposed 30-inch storm drain to the StormTech detention/filter system (pipe P-2) appears to be +/- 5 feet off the building foundation and below the level of the footing, based on the floor elevations noted. NSC should confirm suitability of proposed pipe materials for proposed installation near building foundations and below the footing bearing zone (similar to comment #33).
- 37. The bioretention cell behind unit #66 appears to be located within several feet of the proposed storm drain to the detention/filter system, with a bottom of underdrain elevation near the top of the proposed storm drain.

Mr. Brooks More July 5, 2007 Page 5 of 8

The design should be reviewed to provide adequate separation between the bioretention cell and the storm drain.

38. This office recommends placement of cleanout risers at the ends of all underdrain pipe runs for the bioretention cells.

Sheet 11 of 38, Site Plan – Sheet 2

39. The barrier-free ramp at the northwest corner of the Sweetflag Drive/Lupine Lane intersection should be revised to align with the proposed crosswalk.

Utility Plans, General Comments

- 40. We assume that NCS will coordinate electrical service and other wire utility locations with CMP and other utility companies and will show the approved locations on the final plans.
- 41. Underground utility services to the proposed buildings should be shown on the final construction drawings.
- 42. The plans show several locations with proposed water lines and water valves located less than 5 feet away from proposed storm drain pipes and catch basin structures. We assume that NCS will coordinate with PWD to conform to their minimum pipe separation standards and all other PWD requirements.
- 43. Gorrill-Palmer assumes that NCS will coordinate with the Windham Fire Department for approval of hydrant locations and sufficiency of proposed fire flows within the development.
- 44. Utility Plan sheets 3 and 4 should include notes necessary to coordinate sitework and utility construction with proposed reconstruction of the existing 36-inch storm drain pipe across the site from Depot Street to the river. We understand that the storm drain reconstruction plans are being prepared under separate contract to the Town and that NCS is coordinating sitework design with the storm drain design by others.

Sheet 16 of 38, Utility Plan - Sheet 2

45. There appears to be an existing utility pole located within the proposed barrier-free ramp at the southeast corner of Depot Street & Trillium Drive. NCS should confirm that minimum required accessible route clearances are provided in accordance with ADA (Americans with Disability Act) Standards.

Road, Sewer and Water Profiles - General Comments

46. The profiles appear to show 5.5 feet of cover on water lines and less that 1 foot of vertical separation from sewer lines at several locations. We assume that NCS will coordinate with PWD to meet their minimum pipe separation requirements.

Sheet 23 of 38, Erosion and Sedimentation Control Plan – Sheet 1

- 47. As noted in comment #25, a demolition phase erosion control plan should be included in the construction plan set. That plan, or a supplemental plan for the initial site grading and fill phase, should delineate the preload area and any necessary erosion control measures and should include necessary Best Management Practices (BMPs) to control sedimentation after demolition before the site is stabilized (such as stone check dams, sediment traps, sedimentation basins, etc.).
- 48. This plan shows silt fence across proposed storm drain outlets. Silt fence is not appropriate for sediment control at concentrated flow points; other BMPs should be specified for such locations.
- 49. The erosion control plans should refer to the riverbank stabilization details on Sheet 26 of the plan set.
- 50. Slope stabilization requirements should be shown or noted on the erosion control plans.
- 51. The location of the construction fence should be coordinated with the grading plan in the area of the grading easement at the railroad ROW.

Mr. Brooks More July 5, 2007 Page 6 of 8

Sheet 24 of 38, Erosion and Sedimentation Control Notes

52. In general, the notes should be revised as necessary to incorporate provisions of the Erosion and Sedimentation Control narrative (Section 11) that apply to the construction phase. Some of the requirements stated in Section 11 do not appear to be included or appear to contradict the plan notes. These include stormwater diversion, dust control, slope stability and problem areas (Section 2.0); temporary non-structural measures (Section 3.0); permanent seed mixture (Section 4.0); and maintenance (Section 5.0).

Sheet 25 of 38, Erosion and Sedimentation Control Details

53. Additional erosion control details may be necessary to address the demolition and initial site grading phases of the project, such as stone check dam, sediment trap and sedimentation basin.

Sheet 26 of 38, Erosion and Sedimentation Control Details

- 54. The riverbank restoration plan view and profile should include notes that require construction in accordance with the project geotechnical recommendations.
- 55. Design calculations for the proposed riprap installation at the base of the slope should be provided. Calculations should address applicable requirements from the geotechnical report as well as riverbank protection requirements for a specific design flood.

Sheet 27 of 38, Underground Detention Details - Sheet 1

- 56. NCS should confirm the following design details for the detention/filter system with the StormTech manufacturer's representative:
 - ◆ The filter cross section shows the StormTech chambers wrapped in woven geotextile. Is this required for all rows of the proposed system?
 - The detention/filter system layout does not appear to direct stormwater flows to a single isolator row as typically recommended by the manufacturer.
 - We recommend that NCS confirm the size and specifications for the crushed stone material surrounding the chambers.
 - We recommend that NCS consider placement of geotextile material to separate the crushed stone chamber bedding and soil filter layers.
 - It appears that additional cleanout/inspection ports are needed.
 - The impermeable liner should be shown on the filter cross section.

Sheet 29 of 38, Drainage & Construction Details

- 57. The typical pipe section should note the type of pipe.
- 58. The precast concrete catch basin detail notes an RCP outlet pipe with a catch basin hood. Is RCP pipe proposed only for catch basin connections? If so, a detail for adapting to other types of storm drain pipe should be included.
- 59. Are catch basin hoods proposed for all catch basins?
- 60. A bioretention cell cleanout detail should be provided.

Sheet 33 of 38, Construction Details

- 61. A detectable warning strip conforming to ADA requirements should be added to the handicap ramp detail.
- 62. A typical section for Depot Street reconstruction should be provided.

Mr. Brooks More July 5, 2007 Page 7 of 8

Sheet 34 of 38 (S1), Proposed Retaining Wall Plan, Section, Elevations

- 63. Slope grading shown on the partial site plan does not appear to agree with the grading plan (Sheet 6 of 38). The partial site plan shows a top of slope elevation 112 and 2H:1V slopes, compared to the grading plan which shows top of slope elevation 114 and approximately 1.7H:1V slopes, respectively. The plans should be revised accordingly.
- 64. The extent of riprap shown on the elevation view does not appear to match the riprap detail shown on the riverbank protection detail (sheet 26 of 38). These two plans should be coordinated and revised accordingly.

Sheet 38 of 38, Plan & Profile - Depot Street

- 65. The plan view should show all proposed construction, including pavement sawcut locations, new pavement, limits of construction, proposed grades, fill slopes, etc.
- 66. A note referring to the proposed site construction plans and requiring the contractor to coordinate construction with onsite work should be added to the plan.
- 67. The plan should note that any existing ROW monuments or other survey markers disturbed by construction shall be reset by a Maine-licensed Land Surveyor in accordance with Town Standards.
- 68. Any required alteration of existing catch basins, sanitary manholes, fire hydrants or other utility structures should be noted on the plans.
- 69. The plan appears to show proposed sewer replacement extending south on a side street from manhole SMH-5. Limits of construction should be shown on the plan, or plans should be provided for construction extending beyond the limits of this plan sheet, if applicable.

Traffic Review

Gorrill-Palmer reviewed the traffic study prepared by Bill Bray and dated March 2007. We also completed a site visit on June 2, 2007. The study was completed in accordance with current industry standard practice. We present the following comments for the applicant's consideration and response as appropriate:

- 1. We concur with the trip generation, traffic volume adjustments, and crash analysis. We would question the full occupancy date of 2009, but given the 1% annual adjustment to the background volumes, we would not expect that a study horizon several years later would affect the conclusions of the study.
- 2. The capacity analysis showed only one movement below level of service "D" out of the several intersections that were studied. This was the Chute Road westbound thru-left turn movement at River Road. The volumes indicate only 3 right turns out of Chute Road, which would not justify a separate turn lane. The volumes exiting Chute Road would not likely satisfy a signal warrant; therefore, the lower level of service is acceptable.
- 3. The study did not address the potential need for a left turn lane on River Road at Depot Street. Since the proposed project sends the majority of the site-generated traffic through this intersection, we suggest that a left turn warrant evaluation be provided.
- 4. The MaineDOT crash summary report should be provided for our review.
- 5. The traffic study discusses only two driveways in the sight distance analysis. The plans show three driveways and an emergency vehicle access. The Depot Street Plan & Profile (Sheet 38 of 38) indicates that Depot Street will be reconstructed in the vicinity of Trillium Lane to achieve a minimum 250 feet of sight distance. Based on our field review and this plan, sight distances appear to be adequate. However, the applicant should clarify the driveway situation and provide there own assessment of the sight distances.

Mr. Brooks More July 5, 2007 Page 8 of 8

Closing

Our office is available to review any revisions to the plans to address the items noted above. Please contact this office with any questions.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Lawrence R. Bastian, P.E.

Senior Engineer

Enc.

Copy: Lee Allen, Northeast Civil Solutions, Inc.

Steve Etzel, HRC

U:\887.22\VLF Comments1_7-3-07.doc



November 23, 2004

Ms. Renee Lewis
50 Monument Square, 2nd Floor
Portland, Maine 04101

Re: Background Arsenic Sampling, South Windham, Maine

Dear Renee:

Ransom Environmental Consultants, Inc. (Ransom) is pleased to present this report on background arsenic sampling in South Windham, Maine. As you are aware, concentrations of arsenic in soils were detected above Maine Department of Environmental Protection (DEP) Remedial Action Guidelines (RAG) at the 7 and 13 Depot Street properties. The RAG for arsenic at residential sites is 10 mg/kg. The objective of the background arsenic testing was to evaluate whether the arsenic present at the 7 and 13 Depot Street properties is naturally occurring.

During surface soil sampling by the Jacques Whitford Company (JWC) in August 2003, arsenic concentrations at the 7 Depot Street site ranged from 11 to 22 mg/kg. Surface soil sampling by JWC in May 2004 detected arsenic at the 13 Depot Street site at concentrations of 12.8 and 15.6 mg/kg. JWC reported that the arsenic detected was likely naturally occurring.

On November 8, 2004 Ransom collected three background soil samples from the Windham Historical Society, the US Postal Service Training Center, and the South Windham Fire Department. The samples were collected from the top 6 inches of soil using a decontaminated hand trowel. Testing of the soils was conducted by Katahdin Analytical Services of Westbrook, Maine. The arsenic results are summarized below. The laboratory data is attached hereto.

Report on Supplemental Site Investigation, 7 Depot Street, Windham, Maine, Jacques Whitford Company, Inc. March 9, 2004

² Phase I and Phase II Environmental Site Assessments, Former Depot Energy Company, 13 Depot Street, Windham, Maine; Jacques Whitford Company, Inc., June 17, 2004.

Sample No.	Location	Arsenic (mg/kg)
SS1	Windham Historical Socie	28.3
SS2	US Postal Service Training Center	5.1
SS3	South Windham Fire Department	24.1

Two of the three background soil samples contained arsenic at concentrations above the DEP residential RAG of 10 mg/kg. As a result, Ransom concludes that the arsenic detected at the 7 and 13 Depot Street sites is likely naturally occurring.

If you have any questions or concerns, please feel free to call.

Sincerely,

Ransom Environmental Consultants, Inc.

D. Todd Coffin, C.G. Senior Geologist

Enclosures

046016/arsenic rpt 11 24 04





November 17, 2004

Mr. Aaron Martin Ransom Environmental 200 High St. Portland, ME 04101

RE: Katahdin Lab Number:

WU4159

Project ID:

046016

Project Manager:

Mrs. Andrea Colby

Sample Receipt Date(s):

November 08, 2004

Dear Mr. Martin:

Please find enclosed the following information:

- * Report of Analysis (Analytical and/or Field)
- * Quality Control Data Summary
- Chain of Custody (COC)
- Login Report

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Sincerely,

KATAHDIN ANALYTICAL SERVICES

Authorized Signature

11.17.04

VIL_RESP03436

DATA QUALIFIERS

- U Indicates the compound was analyzed for but not detected above the laboratory Practical Quantitation Limit.
- * Compound recovery outside of quality control limits.
- D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.
- E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.
- J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Limit (PQL), but above the Method Detection Limit (MDL).
- B Organics- Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

 Metals- Indicates the analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.
- N Presumptive evidence of a compound based on a mass spectral library search.
- A Indicates that a tentatively identified compound is a suspected aldol-condensation product.
- P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns.
- MCL Maximum Contaminant Level
- NL No limit



REPORT OF ANALYTICAL RESULTS

Client:

Aaron Martin

Ransom Environmental

200 High St.

Portland, ME 04101

Lab Sample ID:

WU4159-001

Report Date:

11/15/2004

PO No.:

Project:

046016

Sample Description					æ	Matrix	Percent Solids(%	-	Date Sample			ate Sived	
SS1						SL	79.1		11/08/20	104	11/08	/2004	20.7.4%
Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	Ву	Prep Method	Prepped Date	Ву	QC	Notes
ARSENIC	28,3	mg/Kg	0.7	1	0.8	SW846 6010	11/12/04	AJW	SW846 305	0 11/11/04	JWM	UK11ICS0	· · · · · · · · · · · · · · · · · · ·





Report of Analytical Results

Client: Aaron Martin

SS1

Ransom Environmental

200 High St.

Portland,ME 04101

Lab Sample ID: WU4159-1 Report Date: 16-NOV-04

. Client PO:

> Project: 046016 SDG: WU4159

Sample Description <u>Matrix</u>

Date Sampled

Date Received

SL 08-NOV-04 08-NOV-04

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Ву	Prep. Method	Prep. Date	Ву	Footnotes
Total Solids	79. %	.1	CLP SOW 788	WG11890	11-NOV-04	JF	CLP SOW 788	***************************************	JF.	





Report of Analytical Results

Client: Aaron Martin

Sample Description

Ransom Environmental

200 High St.

Portland, ME 04101

Lab Sample ID: WU4159-2

Report Date: 16-NOV-04

Client PO:

Project: 046016

SDG: WU4159

Matrix

Date Sampled

Date Received

SS2

SL

08-NOV-04

08-NOV-04

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Ву	Prep. Method	Prep. Date	Ву	Footnotes
Total Solids	76. %	.1	CLP SOW 788	WG11890	11 - NOV-04	JF	CLP SOW 788	10-NOV-04	JF	



REPORT OF ANALYTICAL RESULTS

Client:

Aaron Martin

Ransom Environmental

200 High St.

Portland, ME 04101

Lab Sample ID:

WU4159-002

Report Date:

11/15/2004

PO No.:

Project:

046016

Sample Description						Matrix	Percent Solids(%		Date Sampl		Da Rece	ite: elved	
SS2	,		- a - Stage Ampley - 1			SL	75,8		11/08/20	004	11/08	/2004	
Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	Ву	Prep Method	Prepped Date	Ву	QC	Notes
ARSENIC	5.1	mg/Kg	0.9	1	0.8	SW846 6010	11/12/04	AJW	SW846 305	50 11/11/04	MWL	UK11ICS0	



REPORT OF ANALYTICAL RESULTS

Client:

Aaron Martin

Ransom Environmental

200 High St.

Portland, ME 04101

Lab Sample ID:

WU4159-003

Report Date:

11/15/2004

PO No.:

Project:

046016

Sample Description						Matrix	Percent Solids(%		Date Sample	ed	Da Rece		
SS3	·. · · · · · · · · · · · · · · · · · ·					SL	71.2		11/08/20	104	11/08/	2004	Site of the
Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	Ву	Prep Method	Prepped Date	Ву	QC	Notes
ARSENIC	24.1	mg/Kg	0.9	1	0.8	SW846 6010	11/12/04	AJW	SW846 305	0 11/11/04	JWWI	UK11ICS0	





Report of Analytical Results

Client: Aaron Martin

SS3

Ransom Environmental

200 High St.

Portland, ME 04101

Lab Sample ID: WU4159-3

Report Date: 16-NOV-04

Client PO:

Project: 046016

SDG: WU4159

Sample Description **Matrix**

Date Sampled

Date Received

SL 08-NOV-04 08-NOV-04

Parameter Result Adj PQL Anal. Method QC.Batch Anal. Date Вy Prep. Method Prep. Date Footnotes Ву CLP SOW 788 **Total Solids** 71.% .1 WG11890 11-NOV-04 Æ **CLP SOW 788** 10-NOV-04 JF



PREPARATION BLANK REPORT

Sample ID: PBSUK11ICS0

Batch ID UK11ICS0

Element Name	Result	Units	Flag	PQL	File
ANTIMONY	0.2	mg/kgdrywt	U	0.800	AUK12A
ARSENIC	0.3	mg/kgdrywt	U	0.800	AUK12A
BARIUM	0.02	mg/kgdrywt	U	0.500	AUK12A
BERYLLIUM	0.07	mg/kgdrywt	J	0.500	AUK12A
BORON	0.2	mg/kgdrywt	J	10.0	AUK12A
CADMIUM	0.03	mg/kgdrywt	U	1.00	AUK12A
CALCIUM	0,3	mg/kgdrywt	U	5.00	AUK12A
CHROMIUM	0.08	mg/kgdrywt	U	1.50	AUK12A
COBALT	0.06	mg/kgdrywt	U	3.00	AUK12A
COPPER	0.08	mg/kgdrywt	U	2.50	AUK12A
IRON	2.	mg/kgdrywt	J	10.0	AUK12A
LEAD	0.2	mg/kgdrywt	U	0.500	AUK12A
MAGNESIUM	0.8	mg/kgdrywt	U	5.00	AUK12A
MANGANESE	0.05	mg/kgdrywt	J	0,500	AUK12A
MOLYBDENUM	0.1	mg/kgdrywt	U	10.0	AUK12A
NICKEL	0.08	mg/kgdrywt	U	4.00	AUK12A
SELENIUM	0.4	mg/kgdrywt	U	1.00	AUK12A
SILVER	0.07	mg/kgdrywt	U	1.50	AUK12A
STRONTIUM	0.010	mg/kgdrywt	J .	10.0	AUK12A
THALLIUM	0.4	mg/kgdrywt	U	1.50	AUK12A
TIN	2.2	mg/kgdrywt	J.	10.0	AUK12A
TITANIUM	0.18	mg/kgdrywt	J	1.50	AUK12A
VANADIUM	0.07	mg/kgdrywt	U	2.50	AUK12A
ZINC	0.24	mg/kgdrywt	J	2.50	AUK12A

VIL_RESP03444

U The analyte was not detected in the sample at a level greater than the instrument detection limit.

J The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.



LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSOUK11ICS0

Batch ID UKILICSO

Element Name	True Value	Result	Units	Recovery(%) Flag	Limit	s (mg/kgdrywt)	File
ANTIMONY	0.500	49.4	mg/kgdrywt	98.8%	39.8	60.2	AUK12A
ARSENIC	0.500	51.2	mg/kgdrywt	102.4%	39.8	60.2	AUK12A
BARIUM	2.00	190.	mg/kgdrywt	95.0%	159	241	AUK12A
BERYLLIUM	0.0500	4.96	mg/kgdrywt	99.2%	3.98	6.02	AUK12A
BORON	0.500	50.3	mg/kgdrywt	100.6%	39.8	60.2	AUK12A
CADMIUM	0.250	25.6	mg/kgdrywt	102.4%	19.9	30.1	AUK12A
CALCIUM	2.50	253.	mg/kgdrywt	101.2%	199	301	AUK12A
CHROMIUM	0.200	20.0	mg/kgdrywt	100.0%	15.9	24.1	AUK12A
COBALT	0.500	51.4	mg/kgdrywt	102.8%	39.8	60.2	AUK12A
COPPER	0.250	23.0	mg/kgdrywt	92.0%	199	30.1	AUK12A
IRON	1.00	100.	mg/kgdrywt	100.0%	79.5	120	AUK12A
LEAD	0.500	51.4	mg/kgdrywt	102.8%	39.8	60.2	AUK12A
MAGNESIUM	5.00	533.	mg/kgdrywt	106.6%	398	602	AUK12A
MANGANESE	0.500	48.1	mg/kgdrywt	96,2%	39.8	60.2	AUK12A
MOLYBDENUM	0.300	31.0	mg/kgdrywt	103.3%	23.8	36.1	AUK12A
NICKEL	0.500	52.5	mg/kgdrywt	105.0%	39.8	60.2	AUK12A
SELENIUM	0.500	50.2	mg/kgdrywt	100.4%	39.8	60.2	AUK12A
SILVER	0.0500	4.76	mg/kgdrywt	95.2%	3.98	6.02	AUK12A
STRONTIUM	0.500	46.9	mg/kgdrywt	93.8%	39.8	60.2	AUK12A
THALLIUM	0.500	50.8	mg/kgdrywt	101.6%	39.8	60.2	AUK12A
TIN	0.500	54.5	mg/kgdrywt	109.0%	39.8	60.2	AUK12A
TITANIUM	1.00	103.	mg/kgdrywt	103.0%	79.5	120	AUK12A
VANADIUM	0.500	47. 1	mg/kgdrywt	94.2%	39.8	60.2	AUK12A
ZINC	0.500	52.1	mg/kgdrywt	104.2%	39.8	60.2	AUK12A

VIL_RESP03445

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

L Laboratory control sample recovery is less than the laboratory's acceptance limit.





Quality Control Report Blank Sample Summary Report

Cert No E87604

Total Solids

 Samp Type
 QC Batch
 Anal, Method
 Anal, Date

 MBLANK
 WG11890
 CLP SOW 788
 11-NOV-04

Prep. Date 10-NOV-04 Result
U 0.10 %

POL .1 %

VIL_RESP03446





Quality Control Report

Laboratory Control Sample Summary Report

Total Solids

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Lab Sample Id	Samp Type	QC Batch	Date	Prep Date	Units	Spike Amt.	Result	Recovery	Range	RPD			
WG11890-2	LCS	WG11890	11-NOV-04	10-NOV-04	%	90	90.	100	80-120				

VIL_RESP03447

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340 County Road No. 5 P.O. Box 720 Westbrook, ME 04092 Tel: (207) 874-2400 Fnx: (207) 775-4029

CHAIN of CUSTODY

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Katahdin Analytical Services

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Nov. 10, 2004 08:04 AM

Login Number: WU4159

Account: RANSOM001

Ransom Environmental

Project:

Primary Report Address:

Aaron Martin

Ransom Environmental

200 High St.

Portland, ME 04101

Primary Invoice Address:

Accounts Payable Ransom Environmental

Brown's Wharf

Login Information NoWeb

ANALYSIS INSTRUCTIONS :

CHECK NO.

CLIENT PO#

COOLER TEMPERATURE : 1.8

DELIVERY SERVICES : CLIENT

EDD FORMAT

MAIL DATE

PM

: AJC PROJECT NAME : 046016

QC LEVEL

: 11 REGULATORY LIST

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REPORT INSTRUCTIONS

SDG JD

SDG STATUS

Newburyport,MA 01950

Report CC Addresses:

Invoice CC Addresses:

Laboratory Sample ID		Collect Date/Time	Receive Date	Verbal PR Date	Due Date	Comments
WU4159-1	SS1	08-NOV-04 14	4:45 08-NOV-04		19-NOV-04	
Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count		· · · · · · · · · · · · · · · · · · ·
Solid	S SW3050-PREP	07-MAY-05				
Solid	S SW6010-ARSENIC	07-MAY-05	50 g Glass			
Solid	S TS	08-DEC-04		1		
WU4159-2	SS2	08-NOV-04 1	5:15 08-NOV-04		19-NOV-04	
Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	****	
Solid	S SW3050-PREP	07-MAY-05				
Solid	8 SW6010-ARSENIC	07-MAY-05	50 g Glass			
Solid	S TS	08-DEC-04		1		
WU4159-3	SS3	08-NOV-04 18	5;45 08-NOV-04		19-NOV-04	
Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count		
Solid	S SW3050-PREP	07-MAY-05				
Solid	S SW6010-ARSENIC	07-MAY-05	50 g Glass			
Solid	S TS	08-DEC-04		1		

Total Samples:

Total Analyses:

9

Page; 1 of 1

ADDENDUM ORIGINAL CHAIN OF CUSTODY

PLAN FOR SELF-IMPLEMENTING CLEANUP OF PCB REMEDIATION WASTE – PHASE I 7 DEPOT STREET SOUTH WINDHAM, MAINE

Prepared for:

Renee Lewis Village at Little Falls, LLC 2 Market Street, 6th Floor Portland, Maine 04101

Prepared by:

Ransom Environmental Consultants, Inc. 400 Commercial Street, Suite 404 Portland, Maine 04101 (207) 772-2891

> Project No. 046016 November 21, 2005

D. Todd Coffin Maine Certified Geologist No. 310

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Ransom Project 046016 November 21, 2005

1.0 INTRODUCTION

On behalf of Village at Little Falls, LLC, Ransom Environmental Consultants, Inc. (Ransom) has prepared this Plan to address Polychlorinated Biphenyl (PCB) Remediation Waste identified at the former Keddy Mill, located at 7 Depot Street in South Windham, Maine (the Site). PCB Remediation Waste has been identified both inside the Site Building and at the exterior of the Site. Ms. Renee Lewis, representative of Village at Little Falls, LLC, has signed the certification statement required by §761.61(a)(3)(E); the certification is attached as Appendix A. A Site Location Map is attached as Figure 1.

Based on the characterization activities performed at the Site, Ransom determined that interior building surfaces and soils beneath and exterior to the building are PCB-contaminated. The source of the PCBs identified at portions of the interior of the Site Building originated from:

- 1. Release(s) of PCB-mineral oil dielectic fluid (PCB-MODF) from electrical equipment located on the ground floor, first floor, and second floor of the mill building;
- Tracking of PCBs which originated on the ground and first floors onto surfaces in other parts of the Site Building; and
- 3. Fuel oil that apparently became contaminated with PCBs that remains in distribution piping inside the mill building, and in some areas has leaked onto floors and walls from this piping.

PCB-contaminated soils were identified in three areas:

- 1. In a sump located on the ground floor of the former Melt Building;
- 2. In the Melt Building where broken concrete flooring has exposed sub-grade soils; and
- 3. In the Storage and Manufacturing portion of the building where broken concrete flooring has exposed sub-grade soils.

Village at Little Falls, LLC intends to remediate PCB-contaminated concrete floors and walls such that PCB concentrations remaining in concrete and other porous materials are reduced to 1 milligram/kilogram (mg/kg) or less. PCB-contaminated soil beneath and exterior to the Site building will be remediated in accordance with 40 CFR 761.61, and appropriate classification of "Low Occupancy" or "High Occupancy" areas.

PCB clean-up at the Site will be undertaken in three phases, each in accordance with the (United States Environmental Protection Agency's (EPA's) self-implementing procedure under §761.61(a):

Phase I – Building Interior Sludge, Dirt/debris and Oily Materials

The initial phase of PCB mitigation involves clean-up of sludge, dirt/debris and oily materials that have accumulated on floors and walls inside the former mill building. This plan addresses cleanup of sludge, dirt/debris, and oily materials containing PCBs inside the building.

Phase II - Building Interior Porous Surfaces

Following removal of the interior sludge, dirt/debris and oily materials, sampling and testing of porous concrete and wood surfaces will be undertaken to determine additional mitigation requirements. Many of these surfaces are covered with a layer of sludge, dirt/debris or oily materials, thus it is proposed that the sludge, dirt/debris and oily materials are removed and properly disposed prior to sampling of the underlying porous surface. This approach will allow improved visual identification of stained surfaces and permit more representative sampling of the porous material for PCB impacts. A separate plan will be presented that details the supplemental testing and methodology for mitigation of interior porous surfaces.

Phase Ⅲ – Soils

Preliminary testing has identified PCBs in soils both exterior to and beneath the site building. Due to restricted access, additional sampling and testing of soils will be undertaken following partial demolition of the Site Building. A separate plan will be presented that details the supplemental testing and methodology for mitigation of site soils.

The remediation work proposed in this Plan is being undertaken by Village at Little Falls, LLC in order to initiate Site redevelopment activities, which include demolition of the former mill building. In order to facilitate the remediation of this facility, Ransom and Village at Little Falls, LLC respectfully request that this Plan be reviewed and approved by the EPA by December 23, 2005 (30 days from submittal).

Maine Department of Environmental Protection (MEDEP) has reviewed and approved a Voluntary Response Action Plan (VRAP) dated June 8, 2005, and has issued a "No Action Assurance Letter" to Village at Little Falls, LLC and Lumas, Inc. (site owner). The VRAP details the Site background, Site investigation findings and the proposed mitigation plan. MEDEP will issue a "Certificate of Closure" following completion of Site mitigation and review of associated documentation.

2.0 BACKGROUND

2.1 Site Description

The Site consists of a former steel mill located on 7 Depot Road in South Windham, Maine (refer to Figure 1). The approximately 6.5 parcel is bordered by Depot Street acre to the North, Maine Central Railroad tracks to the east, the Presumpscot River to the South and Route 202 to the West. The site was reportedly first developed for industrial use in the 1700s, and over the years uses included a saw mill, grist mill, manufactured wood board mill and the steel mill whose remnants presently occupy the site.

The site is presently occupied by a former mill building constructed primarily of concrete and brick. The majority of the building consists of two levels, including a ground floor/basement that is partially below grade. Structures were added to the building over the years, and historic site plans denote the following uses: boiler house, generator room, press building, melt building, storage and manufacturing, and offices. The forge shop and boiler house have been razed.

2.2 Summary of Previous Investigation Activities

The property has been the focus of several environmental investigations since 1995. The investigation reports reviewed by Ransom include the following:

- 1. Phase I Limited Environmental Assessment, Lot 7 of Map 38, Windham Township, South Windham, Cumberland County, Maine, by Consla Geotechnical Engineering, March 18, 1993.
- 2. Environmental Site Assessment, Phase I & II, Former Steel Mill Property, Route 202 and Depot Street, Windham, Maine, by S.W. Cole Engineering, Inc., November 17, 1997.
- 3. Report on Supplemental Site Investigation, 7 Depot Street, Windham, Maine by Jacques Whitford Company, Inc., March 9, 2004.

The Phase I Limited Environmental Assessment by Consla Geotechnical Engineering identified potential sources of environmental impacts but included no subsurface investigation or chemical testing of soils, sludge or other materials at the Site. The assessment identified numerous tanks, chemical storage containers and operations areas that had the potential to impact the site environment.

Subsurface investigations by S. W. Cole in 1995 and 1996 included completion of twenty-four test pits targeting former storage tanks and other areas of potential concern. Soil samples were screened for volatile organic compounds (VOCs) with a photoionization detector (PID) and six soil samples were tested in a laboratory either for fuel oil, pesticides, PCBs, or heavy metals.

S. W. Cole identified heavy oil-impacted soil at the northern end of the site near Depot Street. The impacted soil was located in the vicinity of a two former above-ground heavy oil storage tanks (now removed). S. W. Cole removed approximately 11 tons of soil impacted by the heavy oil under the oversight of the MEDEP. S. W. Cole identified no significant impacts from pesticides, PCBs or heavy metals during their Site investigation.

In August, 2003, Jacques Whitford completed supplemental investigations including twelve test pits, six hand augers and twenty-three surface soil samples at the 7 Depot Street site to evaluate areas of potential concern identified during previous site investigations. These areas included:

- Two former above ground fuel storage tanks (15,000 and 10,000 gallon capacity) near the railroad tracks on the east side of the site where oil-stained soils were observed during a previous site investigation;
- Two 1,000 gallon underground wastewater tanks adjacent to the north wall of the facility;
- Former 3,000 gallon above-ground fuel tank located at the end of a rail spur on the east side of the site;
- Transformer pad/electrical substation on the south side of the site;
- Former drum storage area at the south end of the former mill building;
- Former garage at the south end of the site; and
- Two floor drains on the ground floor of the main mill building.

Selected soil samples were tested for VOCs (EPA Method 8260-B), diesel-range organics (DRO), the eight RCRA metals, and PCBs. Sampling by Jacques Whitford also included testing of sludge and dirt/debris from floor surfaces inside the mill building for PCBs. The interior PCB sample locations Sampled by Jacques Whitford are shown on Figure 2 and included:

Sample ID	Location/Rationale
SS6	Material from floor sump along south building wall in Melt Building
SS7	Sludge on concrete floor south of maintenance shop, first floor
SS8/SS9	Sludge on concrete floor in maintenance shop, first floor
SS10	Sludge on concrete floor near former transformer, first floor
SS101A/B	Material from floor sump in Melt Building, ground level
SS102	Dirt/debris pile on concrete floor on ground level in Melt Building
SS103	Dirt/debris pile on concrete floor on ground level Melt Building
SS104	Dirt/debris pile on concrete floor on ground level Melt Building

Jacques Whitford collected samples SS6 and SS101 from a floor sump along the south wall in the Melt Building. The sump was about 1.5 ft x 1.5 ft square and contained water at a depth of about 2 ft below the floor level. Hand excavation along the building wall did not identify a discharge pipe from the drain. Jacques Whitford indicated that the drain may have an open bottom or sides under the building floor, with no point discharge.

Samples SS7, SS8/SS9 (co-located with SS8), SS10, SS102, SS103, and SS104 were composed of sludge that had accumulated on the building's concrete floor. SS7, SS8/SS9 and SS10 were collected from the first floor of the building. Sample locations were selected based on proximity to oil stains, maintenance activities and former electrical equipment, such as transformers.

Total PCBs concentrations of 174 ppm (Aroclor 1254) were detected in material collected from the floor sump located along the south wall of the building basement/ground floor (SS6). Confirmatory sampling from the same drain indicated 262 ppm PCBs (SS101) and 570 ppm PCBs (SS101 split sample).

Material sampled from the surface of the concrete floor inside the building contained total PCBs ranging from 11 ppm in the maintenance shop (SS8) to 138 ppm on the ground floor of the Melt Building (SS103). The PCBs detected included Aroclor 1254 and 1260.

2.3 Surrounding Receptors

Public water is available to the site area. However, Portland Water District records for South Windham indicate that a number of residences generally east of the site have private water supply wells. The closest wells to the site include the Boulanger, Georgatos and Reed residences, located about 500 to 1,000 feet to the northeast. Site topography indicates these residences are located at an elevation 20 to 40 feet higher than the site and are likely upgradient with respect to groundwater flow.

The Presumpscot River borders the site to the west, and properties to the north, east and south consist of a mix of commercial, industrial and residential properties. The closest residence to the site is an abutting apartment building about 300 feet east of the mill building. Ransom has identified no schools, playgrounds or day care facilities within 500 feet of the Site.

3.0 SITE CHARACTERIZATION BY RANSOM

Based on the results of the prior Site investigations, Ransom conducted additional characterization of materials inside the mill building for PCBs. The sampling program included the following:

- 1. Collection of surface wipe samples from tile floors on the first and second floors of the former office building and surface wipe samples from the concrete floor in a stockroom on the second floor of the former office building.
- 2. Collection of bulk samples of sludge and dirt/debris on top of concrete floors on the ground level and first floor of the mill building, the first floor Storage and Manufacturing area and Press Building (ground floor);
- 3. Collection of bulk samples of oily sludge/residue from the concrete floor and walls on the ground floor, and from the boiler area on the first floor of the mill building;
- 4. Collection of exposed soils where concrete had been broken in the vicinity of two transformers (in storage) on the first floor of the mill building; and
- 5. Collection of wood chips from oil-stained wood in the vicinity of electrical equipment on the ground and first floors of the mill building.

The samples collected during Ransom's investigation were analyzed by Pace Analytical, Inc. (Pace) of Pittsburgh, PA for PCBs by U.S. EPA Method 8082. Bulk samples were extracted using US EPA Method 3540 (Soxhlet Extraction). The sample results are summarized on Table 1; Laboratory data sheets are provided in Appendix B.

3.1 Surface Wipe Samples

Ransom collected three surface wipe samples (IW-01 through IW-03) from tile floors on the first and second floors of the former office building and the concrete floor in a stockroom on the second floor of the former office building on October 27, 2005. Each sample was collected in accordance with the standard wipe test as defined by §761.123. Wipe sampling locations are depicted on Figure 3.

PCBs were not detected in wipe samples IW-02 and IW-03. Aroclor 1254 and Aroclor 1260 were detected at a total concentration of 43 μ g/100 cm² in IW-01. This concentration is below the clean-up standard for non-porous surfaces in Low Occupancy Areas of 100 μ g/100 cm² in accordance with §761.61(a)(4)(iii)

3.2 Bulk Samples of Sludge, Dirt, and Debris

Ransom collected eight samples of sludge and dirt/debris on top of concrete floors and walls on the ground and first floor levels of the Melt Building (IS-10, IS-11 and IS-14), the ground and first floors of the Storage and Manufacturing area (IS-01, IS-02, IS-05 and IS-06), and the ground floor of the Press Building (IS-08) on October 27 and November 2, 2005 (refer to Figures 2 and 3).

Total PCBs were detected at concentrations ranging from non-detect in the Press Building (IS-08) to 320 mg/kg on the first floor of the Storage and Manufacturing area (IS-02). Four of the eight samples contained total PCBs with concentrations greater than 50 mg/kg. The PCBs detected were Aroclor 1248,

3.3 Bulk Samples of Oily Sludge

Ransom collected three samples of oily sludge from the ground floor wall (concrete) of the Melt Building (IS-03), the concrete floor of the melt building (IS-04) beneath a fuel distribution line that had dripped oil to the floor, and near the boiler in the Storage and Manufacturing area (IS-07). The samples were collected on October 27; the locations are shown on Figures 2 and 3.

Total PCBs in the oily sludge were detected at concentrations ranging from 1.8 (IS-07) to 10 mg/kg (IS-04). PCB constituents included Aroclor 1242 and Aroclor 1254.

3.4 Bulk Soil Sample

Ransom collected one bulk soil sample (IS-05) from an area of broken concrete flooring in the Storage and Manufacturing area on October 27, 2005. The sample location is shown on Figure 2.

The soil sample contained total PCBs at a concentration of 97 mg/kg. The constituents were Aroclor 1254 (66 mg/kg) and Aroclor 1260 (31 mg/kg).

3.5 Bulk Wood Samples

Ransom collected two samples of oil-stained wood in transformer areas, one from a platform in the former generator room (IWD-02), ground floor, and one from a platform on the first floor of the Melt Building (IWD-01). Sample locations are shown on Figures 2 and 3.

The two wood chip samples contained total PCBs of 37 mg/kg (IWD-01) and 100 mg/kg (IWD-02). Aroclor 1242, 1254 and 1260 were identified.

3.6 Data Usability/Validation

To assess the usability/validity of the laboratory data obtained during the investigation work described above, Ransom conducted a limited data validation assessment. This assessment included an evaluation of the following parameters as provided in the laboratory reports:

- 1. Sample integrity;
- 2. Laboratory information;
- 3. Chain of custody;
- 4. Laboratory report details; and
- 5. Quality Assurance/Quality Control.

During the validation process, Ransom reviewed the laboratory analytical reports and completed a Laboratory Report Checklist documenting the performance of the validation. Ransom did not identify laboratory quality-control issues that may have had an adverse impact on the usability of the data.

3.7 Determination of PCB Remediation Waste

The concentration of PCBs in bulk materials sampled inside the mill building to date range from non-detect to 570 mg/kg. Ten of the eighteen samples collected exhibited total PCB concentrations greater than 50 mg/kg. The source of PCBs at the site is likely a combination of spills and leaks of PCB-MODF from transformer and other electrical equipment, PCB-containing lubricating/hydraulic oils and PCB-contaminated fuel oil. Given uncertainty of the source, date of use and original concentration of PCBs in equipment in the mill building, sludge, dirt/debris and oily material on the floors and walls of the mill building will be presumed to be "PCB Remediation Wastes."

3.8 Quantity of PCB Remediation Waste

The quantity of PCB remediation waste has been estimated based on visual assessment of approximate material thickness and square footage of areas covered with sludge, dirt/debris and oily material. The table below summarizes the estimates.

Location	Estimated Impacted	Estimated	Estimated Volume
	Area (sg. ft.)	Thickness (in)	(cubic yards)
Maintenance Shop Area	4,200	0.5	6.5
Melt Building- ground	10,000	0.5	15
Melt Building – 1st	10,000	0.5	15
Storage &	6,000	0.25	4.7
Manufacturing - ground			
Storage &	6,000	0.25	4.7
Manufacturing – 1 st			
Generator Room	400	0.25	0.3
	Estimat	ed Total (cubic yards)	46.2

Specific PCB-contaminated locations are not delineated on the site plans due to the virtual ubiquitous presence of these materials within the mill building. As a result, sludge, dirt/debris and oil material encountered in the mill building will be presumed contaminated with PCBs (>1 ppm) and will be removed for proper disposal at a PCB disposal facility. The only areas of the mill not proposed for PCB clean-up are the former offices (2nd floor, Figure 3) where wipe testing of floors indicated concentrations of PCBs below clean-up standards (refer to Section 3.1), and the Press Building (ground floor, Figure 2) where bulk sample testing identified no PCBs.

4.0 CLEANUP PLAN

4.1 Objective

The objective of the cleanup activities conducted under this Plan is to remove sludge, dirt/debris and oily material from the concrete flooring and walls of the former mill building. Following removal of this material, additional characterization of underlying concrete and soils will be conducted, and self-implementation plans will be submitted to EPA for subsequent mitigation. The mill building is proposed to be demolished for site redevelopment.

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4.2 Cleanup Goal

It is assumed that sludge, dirt/debris and oily material identified in the mill building contains PCB concentrations greater than 1 mg/kg. Accordingly, this material will be collected and properly disposed as PCB Remediation Waste.

4.3 Public Notification

Ransom will notify the U.S. EPA, MEDEP, and the Windham Health Department regarding the performance of the work prior to implementation of the Plan.

4.4 Necessary Permits

Ransom has submitted a Voluntary Response Action Plan to MEDEP and has received approval for site mitigation. Ransom has identified no other permit requirements.

4.5 Sludge, dirt/debris and Oily Material Removal

Ransom will be on-site to oversee contractor removal of sludge, dirt/debris and oily material from the mill building. Depending on the consistency of the material, PCB waste will be recovered using either a vacuum equipped with a HEPA-filter, or by shoveling into storage containers (e.g., hardened sludge and oily materials). Dust suppression, such as application of a spay mist, will be implemented on an as-needed basis.

For oil-stained concrete surfaces, the contractor will apply a petroleum-based agent (e.g., #2 fuel oil) to assist in removing residual PCB contamination. Applied liquids and residuals will be contained with plastic sheeting and absorbent pads.

Collected materials will be stored in labeled 55-gallon drums or roll-off containers. The containers will be kept closed except during transfer of waste to the containers. Used HEPA filters and containment materials (*i.e.*, plastic sheeting, tape, lumber) will be managed as PCB Remediation Waste. Following appropriate waste characterization activities, the PCB Remediation Waste is scheduled to be disposed at The Environmental Company Michigan Disposal Waste Treatment Plant in Belleville, Michigan.

Fuel distribution piping was found to contain concentrations of total PCBs greater than 1 ppm, but less than 50 ppm. This piping will be disassembled, the ends of the pipes capped, then disposed at a licensed Special Waste landfill in Maine (e.g., Sawyers in Hamden, or Crossroads special waste landfill in Norridgewock) following characterization in accordance with the Special Waste landfill permit requirements.

4.6 Confirmatory Sampling and Cleanup Verification

Following the removal of the PCB-contaminated sludge, dirt/debris and oily materials from the mill building, Ransom will conduct sampling of the underlying concrete to assess the potential for residual PCBs. Samples will be collected in visibly stained areas and other locations where PCBs were identified during bulk sample characterization. Sampling will be conducted in accordance with §761.265, "Sampling Bulk PCB Remediation Waste and Porous Surfaces." If PCBs are identified at concentrations greater than 1 mg/kg, a plan for mitigation of the concrete will be prepared and submitted to EPA.

4.7 Contingencies

The proposed PCB mitigation plan is inherently conservative in that virtually all sludge, dirt/debris and oil materials encountered within the mill building is assumed to be PCB Remediation Waste with total PCB concentrations >50 ppm (the excluded areas being the former offices and Press Building). The greatest uncertainty is the volume of the material that will be collected, stored and disposed off site. Our client and the contractor are prepared to collect and properly dispose of additional PCB Remediation Waste if actual volumes exceed the estimates detailed herein.

5.0 PROPOSED IMPLEMENTATION SCHEDULE

Ransom proposes the following implementation schedule for the Plan:

Activity	Completion Date
Submittal of Plan	November 23, 2005
US. EPA Approval (expected)	December 23, 2005
Interior Building Material Removal	January-February 2005

TABLES

TABLE 1: PCB Sample Results Interior of Keddy Mill South Windham, Maine

Sam	ple identifier	IW-01	IW-02	IW-03	IWD-01	(WD-02	IS-01	IS-02	IS-03	IS-04	IS-05	IS-06
	Sample Type	Wipe	Wipe	Wipe	Wood		Sludge/ Solids	Sludge/ Solids	Sludge/ Solids	Sludge/ Solids	Sludge/ Solids	Sludge/ Solids
er.	Location	2 nd floor, Manufacturing and Office	2 nd floor, Manufacturing and Office	2 nd floor, Manufacturing and Office	1 st floor, Melt Building	floor, Forge		1 st floor, Storage & Manufacturing	Ground floor, Melt Building walf	Ground floor, Melt Building, beneath pipe cutoff	Ground floor, Storage & Manufacturing, cut out	Ground floor, Storage & Manufacturing
Gallery Services	Result Units	μg	þg	þg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs Co	ollection Date	27-Oct-05	27-Oct-05	27-Oct-05	27-Oct-05	2-Nov-05	27-Oct-05	27-Oct-05	27-Oct-05	27-Oct-05	27-Oct-05	27-Oct-05
Aroclar 1016	TO SERVICE TO	<5.0	<5.0	<5.0	<2.2	<7.0	<4.5	<41	<1.0	<1.1	<3.9	<5.3
Aroclor-1221		<5.0	<5.0	<5.0	<2.2	<7.0	<4.5	<41	<10	<1.1	<3.9	<53
Aroclor-1232		<5.0	<5.0	<5.0	<2.2	<7.0	<4.5	<41	<1.0	<1.1	<3.9	<5.3
Aroclor-1242		3 J	<5.0	<5.0	17	71	<4.5	<41	3.6	1.7	<3.9	<5.3
Aroclor-1248		<5.0	<5.0	<50	<2.2	<7.0	<4.5		<1.0	<1.1	< 39	
Araciór-1254		24	<5.0	<5.0	12	34	89	320	3.2	8.5	66	62
Arctior-1260	5-3-3-4-3-4-1 [17	<5.0	<5.0	7.9	<7.0	<4.5	<41	<1,0	<11	31	. 27
PCB Total	30年,各种农主	43	<5.0	<50	37	100	89	320	6.7	10	97	120

Notes:

NA = Not available

µg = microgram

mg/kg = milligram per killigram

MDEP = Maine Department of Environmental Protection

PCBs = Polychlorinaled Biphenyls

Bold values indicate exceedance of guideline

J = Estimaled value

TABLE 1: PCB Sample Results Interior of Keddy Mill South Windham, Maine

	Sample Identifier	IS-07	IS-08	IS-09	IS-10	IS-11	IS-14	IS-13	Equip. Blank	SS101A	SS101B	SS102	SS103	SS104	SS5
		Sludge/	Sludge/	Solids	Sludge/	Sludge/	Sludge/	Sludge/	Aqueous	Soil/Solids	Soll/Solids	Soil/Solids	Soil/Solids	Soil/Solids	Soil/Solids
	Sample Type	Solids	Solids		Solids	Solids	Solids	Solids							
	Location	Ground floor,	Ground	Ground	1 st floor,	1 st floor,	1 st floor,	Duplicate of	Rinsate	Ground	Ground	Ground	Ground	Ground	Ground
		Press	floor, Press	floor,	Melt	Melt	Melt	IS-09	Blank	floor, floor	floor, floor	floor, soil	floor, soil on:	floor, soil on	floor
100100100000000000000000000000000000000		Building	Building, pit	adjacent to	Building	Building	Building	(ground	Ì	sump (split	sump (split	on floor	floor, Meit	floor	
		_		main stairs				floor)		sample)	sample)		Building	1	
	Result Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	μg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
													!		
PCBs	Collection Date	27-Oct-05	27-Oct-05	2-Nov-05	27-Oct-05	2-Nov-05	2-Nov-05	2-Nov-05	27-Oct-05	13-Jan-04	13-Jan-04	13-Jan-04	13-Jan-04	13-Jan-04	25-Nov-03
Aroclor-1016		<1.0	<1.0	<1.0	<6.0	<3.4	<5 2	<1.0	<1.0	<4.41	<31	<6.68	<29.8	<29.9	< 39.2
Aroclor-1221		<1.0	<1.0	<1.0	<6.0	<3.4	<5.2	<1.0	<1.0	<4.41	<31	<6.68	<29.8	<29.9	< 39.2
Aroclor-1232		<1.0	<1.0	<1.0	<6.0	<3.4	<5.2	<1.0	<1.0	<4.41	<31	<6.68	<29.8	<29.9	< 39.2
Aroclor-1242		<10	<1.0	<1.0	<6.0	<3.4	<5.2	<1.0	<1.0	<4.41	<31	<6.68	<29.8	<29 9	< 39.2
Aroclor-1248		<1.0	<1.0	2.2	<60	15	<5.2	2	<1.0	<4.41	<31	<6.68	<29.8	<29.9	< 39.2
Aroclor-1254		1.8	<1.0	3.6	41	39	2.7	2.9	<1.0	262	570	71.1	138	100	45
Araclor-1260		<1.0	<1.0	<1.0	<6.0	15	<5.2	<1.0	<1.0	<4 41	<31	<6.68	<29.8	<29.9	
PCB Total		1.8	<1.0	5.8	41	69	27	4.9	<1.0	262	570	71.1	138	100	77

Notes:

NA = Not available

µg = microgram

mg/kg = milligram per killigram

MDEP = Maine Department of Environmen

PCBs = Polychlorinated Biphenyls

Bold values indicate exceedance of guidelii

J = Estimated value

TABLE 1: PCB Sample Results Interior of Keddy Mill South Windham, Maine

Variabiles .	Sample Identifier	SS6	SS7	SS8	SS9	SS10
	Sample Type	Soil/Solids	Sludge/Solids	Sludge/Solids	Sludge/Solids	Sludge/Solids
	Location	Ground floor - floor sump	1 st floor	1 st floor, Maintenance Shop	1 st floor, Maintenance Shop	1 st floor
	Result Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs	Collection Date		25-Nov-03	25-Nov-03	25-Nov-03	25-Nov-03
Aroclor-1016		< 48.2	< 33.1	< 54.6	3.2	< 43.9
Aroclor-1221		< 48.2	< 33 1	< 54.6	< 47.6	< 43.9
Aroclor-1232		< 48.2	< 33.1	< 54.6	< 47.6	< 43.9
Aroclar-1242		< 48.2	< 33.1	< 54.6	< 47.6	< 43.9
Aroclor 1248		< 48.2	< 33.1	< 54.6	< 47 6	< 43.9
Aroclor-1254		120	13	11	10	5.1
Aroclor-1260		54	< 33.1	< 54,6	3.5	< 43.9
PCB Total		174	13	11	16	5

Notes.

NA = Not available

µg = microgram

mg/kg ≈ milligram per killigram

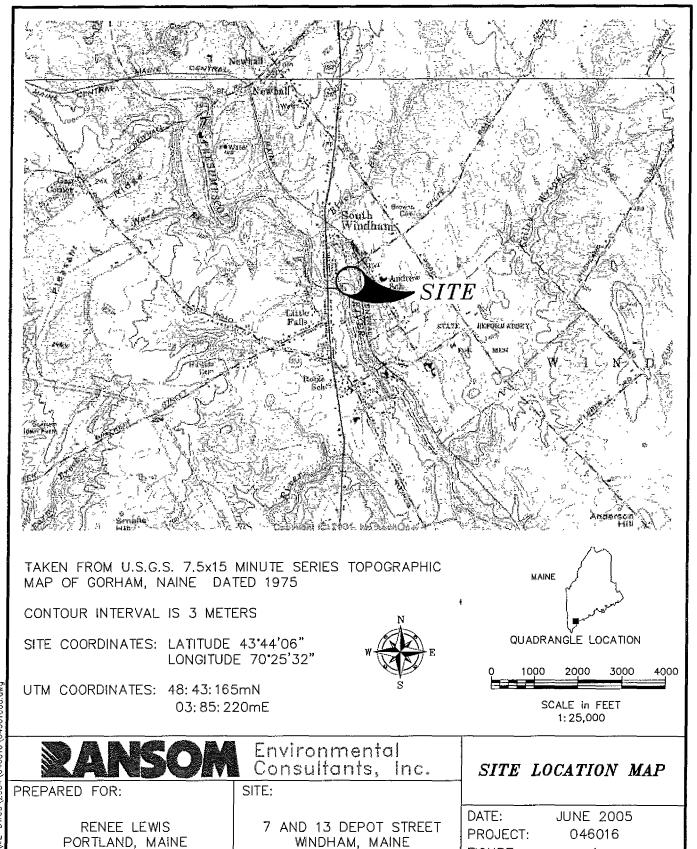
MDEP ≈ Maine Department of Environmen

PCBs = Polychlorinated Biphenyls

Bold values indicate exceedance of guidelii

J = Estimated value

FIGURES



COSTANT AND ACCOUNT

FIGURE:

APPENDIX A

Certification

Certification

The undersigned, as owner of the property where the cleanup site is located and the party conducting the cleanup, hereby certifies that all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file and available for EPA inspection at:

Ransom Environmental Consultants, Inc. 400 Commercial Street, Suite 404 Portland, Maine 04101

Signatur

Manager, Village at Little Faels, UC

Title

Date

APPENDIX B

Laboratory Data Sheets



5203 Triangle Lane Export, PA 15632

Phone: 724 733.1161 Fax: 724.327.7793

Ms. Lisa Haines

Ransom Environmental Consultants, Inc.

400 Commercial Street

Suite 404

Portland, ME 04101

Client Ref.: 046016

Client Sample ID: Sample Matrix:

05-6344 0511-0761

IS-09 Solid

Date Sampled:

11/02/2005

Date Received:

Lab Project ID:

Lab Sample ID:

11/03/2005

Inorganic Extraction

Client Site: Keddy Mill

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	68	N/A	%	JRC	11/10/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD		·					· • • • • • • • • • • • • • • • • • • •
Aroclar-1016	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Arocior-1221	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Arocior-1232	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Arocior-1242	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	2.2	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1254	8082(1)	3.6	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	5.8	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence.

VIL_RESP03475

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REPORT OF LABORATORY ANALYSIS





5203 Triangle Lane Export, PA 15632

Phone. 724.733 1161 Fax⁻ 724.327.7793

Ms. Lisa Haines

Ransom Environmental Consultants, Inc.

400 Commercial Street

Suite 404

Portland, ME 04101

Client Ref.: 046016

Client Site: Keddy Mill

Lab Project ID:

05-6344

Lab Sample ID: Client Sample ID: 0511-0762

Sample Matrix:

IS-11 Solid

Date Sampled:

11/02/2005

Date Received:

11/03/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	97	N/A	%	JRC	11/10/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD	+						
Aroclor-1016	8082 ⁽¹⁾	<3.4	3.4	mg/kg	ŘĎJ	11/10/2005	0044325-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<3 4	3.4	mg/kg	RDJ	11/10/2005	0044325-1	<1 0
Aroclor-1232	8082 ⁽¹⁾	<3.4	3.4	mg/kg	RDJ [*]	11/10/2005	0044325-1	<1.0
Aroclor-1242	8082 ^(†)	<3.4	3.4	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	15	3,4	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	39	3.4	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	15	3 4	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	69	3.4	mg/kg	RDJ	11/10/2005	0044325-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. Surrogates were diluted out for Aroclor sample 11-0762.

VIL_RESP03476



5203 Triangle Lane Export, PA 15632

Phone: 724.733,1161 Fax: 724.327.7793

Ms. Lisa Haines

Ransom Environmental Consultants, Inc.

400 Commercial Street

Suite 404

Portland, ME 04101

Lab Project ID:

05-6344

Lab Sample ID: Client Sample ID: 0511-0763

Sample Matrix:

IS-14 Solid

Date Sampled

11/02/2005

Date Received:

11/03/2005

Client Site: Keddy Mill Client Ref.: 046016

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	64	N/A	%	JRC	11/10/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD	1			<u> </u>			
Aroclor-1016	8082 ⁽¹⁾	<5.2	5.2	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<5.2	5.2	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<5.2	5.2	mg/kg	RDJ	11/10/2005	00443,25-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	<5.2	5.2	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	<5.2	5.2	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1254	8082(1)	27	5.2	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1260	8082(1)	<5.2	5.2	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	27	5.2	mg/kg	· RDJ	11/10/2005	0044325-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. Surrogates were diluted out for Aroclor sample 11-0763.

VIL_RESP03477

REPORT OF LABORATORY ANALYSIS

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Ransom Environmental Consultants, Inc.

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Portland, ME 04101

Client Site: Keddy MIII Client Ref.: 046016

Lab Project ID: Lab Sample ID: 05-6344

Client Sample ID:

0511-0764 IS-13

Sample Matrix:

Solid

Date Sampled:

11/02/2005

Date Received:

11/03/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Anaiyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	67	N/A	%	JRC	11/10/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD							
Aroclor-1016	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ [°]	11/10/2005	0044325-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<1.0	1,0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	2,0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	2.9	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Araclor-1260	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	4.9	1.0	mg/kg	RDJ `	11/10/2005	0044325-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence.

VIL_RESP03478

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Portland, ME 04101

Client Site: Keddy Mill Client Ref.: 046016

Lab Project ID:

05-6344

Lab Sample ID: Client Sample ID: 0511-0765 IWD-02

Sample Matrix:

Solid

Date Sampled:

11/02/2005

Date Received:

11/03/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	93	N/A	%	JRC	11/10/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls,	ECD						*	
Aroclor-1016	8082 ⁽¹⁾	<7.0	7.0	mg/kg	RĎJ	11/10/2005	0044325-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<7.0	7.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<7 0	7.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	71	7.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1248	8082(1)	<7.0	7.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	34	7.0	mg/kg	RDĴ	11/10/2005	0044325-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	<7.0	7.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	100	7.0	mg/kg	RDJ	11/10/2005	0044325-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. Surrogates were diluted out for Aroclor sample 11-0765.

VIL_RESP03479

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Client Site: Keddy Mill Client Ref.: 046016

Lab Project ID: Lab Sample ID: 05-6238

Client Sample ID:

0510-3449 IW-01

Sample Matrix:

Wipe

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD	<u> </u>						·
Aroclor-1016	608 ⁽¹⁾	<5.0	5.0	ug	RĎJ	11/02/2005	0044177-1	<5.0
Aroclor-1221	608 ⁽¹⁾	<5.0	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0
Aroclor-1232	608 ⁽¹⁾	<5.0	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0
Aroclor-1242	608 ⁽¹⁾	<5.0	5.0	ug	RDJ	11/02/2005	0044177-1	<5 0
Aroclor-1248	608 ⁽¹⁾	<5.0	5.0	ug	RDJ	11/02/2005	0044177-1	<5 0
Aroclor-1254	608(1)	24	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0
Aroclor-1260	608 ⁽¹⁾	17	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0
PCB Total-TCL	608 ⁽¹⁾	43	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0

⁽f) U.S. Environmental Protection Agency, 1982, Test Methods, Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, J.E. Longbottom and J.J. Lichtenberg, eds., EPA-600/4-82-057, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.

Sample Comments: Results reported on an as received basis. 608 Aroclor Analysis: Sample 10-3449 contains Aroclor 1254 at 23.8 ug, Aroclor 1242 at 3.14 ug (which is below the 1.0 ug detection limit) and Aroclor 1260 at 16.5 ug. Together, the total Aroclor result is 43.44 ug.

VIL_RESP03480



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Client Site: Keddy Mill Client Ref.: 046016

Lab Project ID:

05-6238

Lab Sample ID: Client Sample ID: 0510-3450 IW-02

Sample Matrix:

Wipe

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD							
Aroclor-1016	608 ⁽¹⁾	<5.0	5.0	ug	ŔŊ	11/02/2005	0044177-1	<5.0
Aroclor-1221	608(1)	<5.0	5.0	ugʻ	RĎJ ,	11/02/2005	0044177-1	<5.0
Aroclor-1232	608 ⁽¹⁾	<5.0	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0
Aroclor-1242	608 ⁽¹⁾	<5.0	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0
Arocior-1248	608 ⁽¹⁾	<5.0	5.0	ug	RDJ .	11/02/2005	0044177-1	<5.0
Arocior-1254	608 ⁽¹⁾	<5.0	5,0	ug -	RĎJ	11/02/2005	0044177-1	<5.0
Aroclor-1260	608 ⁽¹⁾	<5.0	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0
PCB Total-TCL	608 ⁽¹⁾	<5.0	5.0	ug	RDJ	11/02/2005	0044177-1	<5.0

⁽¹⁾ U.S. Environmental Protection Agency, 1982, Test Methods, Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, J.E. Longbottom and J.J. Lichtenberg, eds., EPA-600/4-82-057, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.

Sample Comments: Results reported on an as received basis.

VIL_RESP03481



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Client Site: Keddy Mill

Lab Project ID:

05-6238

Lab Sample ID: Client Sample ID: 0510-3451 IW-03

Sample Matrix:

Wipe

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Pesticides/PCB

Client Ref.: 046016

Aroctor-1221 608(1) <5.0 5.0 ug RDJ 11/02/2005 0 Aroctor-1232 608(1) <5.0 5.0 ug RDJ 11/02/2005 0 Aroctor-1242 608(1) <5.0 5.0 ug RDJ 11/02/2005 0 Aroctor-1248 608(1) <5.0 5.0 ug RDJ 11/02/2005 0		
Arocfor-1221 608(1) <5.0		
Aroclor-1232 608(1) <5.0	0044177-1	<5.0
Aroctor-1242 608 ⁽¹⁾ <5.0 5.0 ug RDJ 11/02/2005 (Aroctor-1248 608 ⁽¹⁾ <5.0 5.0 ug RDJ 11/02/2005 (0044177-1	<5.0
Aroctor-1248 608 ⁽¹⁾ <5.0 5.0 ug RDJ 11/02/2005 (0044177-1	<5.0
	0044177-1	<5.0
Appelor 1254 809(1) <5.0 5.0 ug RD1 11/02/2005 (0044177-1	<5.0
A(00:01-1204 0001.1 00:00 0.0 dg (120 1102/2000 (0044177-1	<5.0
Aroclor-1260 608 ⁽¹⁾ <5.0 5.0 ug RDJ 11/02/2005 (0044177-1	<5 0
PCB Total-TCL 608(1) <5.0 5.0 ug RDJ 11/02/2005 (0044177-1	<5.0

(1) U.S. Environmental Protection Agency, 1982, Test Methods, Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, J.E. Longbottom and J.J. Lichtenberg, eds., EPA-600/4-82-057, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.

Sample Comments: Results reported on an as received basis.

VIL_RESP03482

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Client Site: Keddy Mill Client Ref.: 046016

Lab Project ID:

05-6238

Lab Sample ID: Client Sample ID: 0510-3452 IWD-01

Sample Matrix:

Solid

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	73	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD		1	-1-AIAV				
Aroclor-1016	8082 ⁽¹⁾	<2.2	2.2	mg/kg	RĎJ	11/10/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<2.2	2.2	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<2.2	2.2	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	17	2.2 ^	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	<2.2	2.2	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	12	2.2	mg/kg	RDĴ	11/10/2005	0044258-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	7.9	2.2	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	37	2.2	mg/kg	RDJ	11/10/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1998, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. 8082 Aroclor Analysis: The surrogates are diluted out.

VIL_RESP03483

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Portland, ME 04101

Client Site: Keddy Mill Client Ref.: 046016

Lab Project ID: Lab Sample ID: 05-6238 0510-3453

Client Sample ID: Sample Matrix:

IS-01 Solid

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	74	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls,	ECD	.•	-					
Aroclor-1016	8082 ⁽¹⁾	<4.5	4.5	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<4.5	4.5	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<4.5	4.5	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	<4.5	4.5	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	<4.5	4.5	mg/kg	" RDJ "	11/08/2005	0044258-1	<1.0
Aroclor-1254	8082(1)	89	4.5	mg/kg	` RĎJ	11/08/2005	0044258-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	<4.5	4.5	mg/kg	RDJ	11/08/2005	0044258-1	` <1.0
PCB Total-TCL	8082 ⁽¹⁾	89	4.5	mg/kg	RDJ	11/08/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. 8082 Aroclor Analysis: The surrogates are diluted out. The spike is diluted out of the MS and MSD performed on this sample. Recovery in the LCS is within limits.

VIL_RESP03484



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Client Site: Keddy Mill Client Ref.: 046016

Lab Project ID:

05-6238

Lab Sample ID: Client Sample ID: 0510-3454

Sample Matrix:

IS-02 Solid

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	81	N/A -	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank iD	Blank Result
Polychlorinated Biphenyls,	ECD		***************************************					
Aroclor-1016	8082 ⁽¹⁾	<41	41	mg/kg	RDJ	11/10/2005	0044258-1	<1,0
Aroclor-1221	8082 ⁽¹⁾	<41	41	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<41	41	mg/kg	· RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1242	8082(1)	<41	41	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	<41	41	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1254	8082(1)	320	41	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclar-1260	8082 ⁽¹⁾	<41	. 41	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	320	41	mg/kg	RDJ	11/10/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. 8082 Aroclor Analysis: The surrogates are diluted out.

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Portland, ME 04101

Client Site: Keddy Mill

Client Ref.: 046016

Lab Project ID: Lab Sample ID: Client Sample ID: 05-6238 0510-3455

Sample Matrix:

IS-03 Solid

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	97	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls,	ECD							
Aroclor-1016	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<1.0	1.0	mg/kg	` RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	3.6	10	mg/kg	RÐJ	11/10/2005	0044258-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	3.2	1.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	6.7	1.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence.

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VIL_RESP03486



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Portland, ME 04101

Client Site: Keddy Mill

Lab Project ID:

05-6238

Lab Sample ID: Client Sample ID: **0510-3456** IS-04

Sample Matrix:

Solid

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Inorganic Extraction

Client Ref.: 046016

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	92	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD				<u> </u>			
Aroclor-1016	8082 ⁽¹⁾	<1.1	1.1	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<1 1	1.1	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Arocior-1232	8082 ⁽¹⁾	. <1.1	1.1	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclar-1242	8082 ⁽¹⁾	1.7	11	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1248	8082(1)	<1.1	1.1	mg/kg	ŢŰŖĎJŢ	11/10/2005	0044258-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	8.5	1.1	mg/kg	, ŘDJ	11/10/2005	0044258-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	<1.1	1.1	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	10	1.1	mg/kg	RDJ	11/10/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. 8082 Aroclor Analysis: The surrogates are diluted out.

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Portland, ME 04101

Client Site: Keddy Mill Client Ref.: 046016 Lab Project ID:

05-6238

Lab Sample ID: Client Sample ID: 0510-3457

Sample Matrix:

IS-05 Solid

Date Sampled:

10/27/2005

Date Received:

10/21/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	84	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls,	ECD							
Aroclor-1016	8082 ⁽¹⁾	<3.9	3.9 ⁷	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<3.9	3.9	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<3.9	3.9	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	<3.9	3.9	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	<3.9	3.9	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	66	3.9	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	31	3,9	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
PGB Total-TCL	8082 ⁽¹⁾	97	3,9	mg/kg	RDJ	11/10/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. 8082 Aroclor Analysis: The surrogates are diluted out.

VIL_RESP03488

REPORT OF LABORATORY ANALYSIS

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5203 Triangle Lane Export, PA 15632

Phone: 724 733,1161 Fax: 724,327 7793

Ms. Lisa Haines Ransom Environmental Consultants, Inc.

400 Commercial Street

Suite 404

Portland, ME 04101

Client Site: Koddy Mill

Client Site: Keddy Mill Client Ref.: 046016

Lab Project ID: Lab Sample ID:

05-6238

Client Sample ID:

0510-3458 IS-06

Sample Matrix:

Solid

Date Sampled:

10/27/2005

Date Received:

10/28/2005

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	63	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls,	ECD				_, , , , , , , , , , , , , , , , , , ,			
Aroclor-1016	8082 ⁽¹⁾	<53	5.3	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<5.3	5,3	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<5.3	5.3	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	<5.3	5.3	mg/kg	RDJ	11/10/2005	0044258-1	<1,0
Aroclor-1248	8082(1)	35	5.3	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	62	5.3	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1260	8082 ^(†)	27	5.3 '	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	120	5.3	mg/kg	RDJ	11/10/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. 8082 Aroclor Analysis: The surrogates are dijuted out.

VIL_RESP03489

REPORT OF LABORATORY AMALYSIS

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5203 Triangle Lane Export, PA 15632

Phone. 724.733.1161 Fax: 724.327.7793

•

Ms. Lisa Haines Ransom Environmental Consultants, Inc.

400 Commercial Street

Suite 404

Portland, ME 04101

Lab Sample ID: Client Sample ID: Sample Matrix:

Lab Project ID:

0510-3459 IS-07 Solid

05-6238

Date Sampled: Date Received:

10/27/2005 10/28/2005

Client Site: Keddy Mill Client Ref.: 046016

Inorganic Extraction

į				Reporting		T	Analysis	Method	Blank
	Test	Method	Result	Limit	Units	Analyst	Date	Blank ID	Result
	Percent Solids	% Solids	80	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	, ECD							
Aroclor-1016	8082 ⁽¹⁾	<1.0	10	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	<1.0	1.0 ·	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	1.8	1.0	mg/kg	RDĴ	11/08/2005	0044258-1	<1.0
Arocior-1260	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	1.8	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence.

VIL_RESP03490

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5203 Triangle Lane Export, PA 15632

Phone: 724 733.1161 Fax: 724 327.7793

W to W. par

Ms. Lisa Haines Ransom Environmental Consultants, Inc.

400 Commercial Street

Suite 404

Portland, ME 04101

Lab Project ID: Lab Sample ID: 05-6238 0510-3460

Client Sample ID: Sample Matrix: IS-08

,

Solid

Date Sampled: Date Received: 10/27/2005 10/28/2005

Client Site: Keddy Mill Client Ref.: 046016

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Sollds	59	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychiorinated Biphenyl	s, ECD							
Arocior-1016	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDĴ	11/08/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1 0
Aroclor-1232	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1242	. 8082 ⁽¹⁾	<1.0 °	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1248	8082(1)	<10	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	<1.0	1,0	mg/kg	RDJ	11/08/2005	0044258-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	<1.0	1.0	mg/kg	RDJ 、	11/08/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence.

VIL_RESP03491

REPORT OF LABORATORY ANALYSIS

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IN ACCORDANGE



Ransom Environmental Consultants, Inc.

Pace Analytical Services, Inc.

5203 Triangle Lane Export, PA 15632

Phone: 724.733.1161 Fax: 724.327 7793

Lab Project ID: Lab Sample ID:

05-6238 0510-3461

Client Sample ID: Sample Matrix:

IS-10

Solid

Date Sampled: Date Received: 10/27/2005 10/28/2005

Client Site: Keddy Mill Client Ref.: 046016

400 Commercial Street

Portland, ME 04101

Ms. Lisa Haines

Suite 404

Inorganic Extraction

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Percent Solids	% Solids	55	N/A	%	JRC	11/09/2005	N/A	N/A

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls	s, ECD						Year 1-17	
Aroclor-1016	8082 ⁽¹⁾	<6.0	6.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<6.0	6.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1232	8082 ⁽¹⁾	<6.0	6.0	mg/kg	RDJ -	11/10/2005	0044258-1	<1.0
Aroclor-1242	8082 ⁽¹⁾	<6.0	6.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1248	8082(1)	<6.0	6.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1254	8082 ⁽¹⁾	41	6.0 ,	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
Aroclor-1260	8082 ⁽¹⁾	<6.0	. 6.0 [:]	mg/kg	RDJ	11/10/2005	0044258-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	41	6.0	mg/kg	RDJ	11/10/2005	0044258-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported in dry weight equivalence. 8082 Aroclor Analysis: The surrogates are diluted out.

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VIL_RESP03492

Page 14 of 15



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Phone: 724.733.1161 Fax. 724.327 7793

Ms. Lisa Haines

Ransom Environmental Consultants, Inc.

400 Commercial Street

Suite 404

Portland, ME 04101

Client Sample ID: Sample Matrix: 05-6238 0510-3463 Equip. Blank Aqueous

Date Sampled: Date Received:

Lab Project ID:

Lab Sample ID:

10/27/2005 10/28/2005

Client Site: Keddy Mill Client Ref.: 046016

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls,	ECD							
Aroclor-1016	8082 ⁽¹⁾	<1.0	1.0	ug/l	RDJ	11/03/2005	0044212-1	<1.0
Aroclor-1221	8082 ⁽¹⁾	<1.0	1.0	ug/l	RDJ	11/03/2005	0044212-1	<10
Aroclor-1232	8082(1)	<1.0	1.0	ug/l	RDJ	11/03/2005	0044212-1	<1.0
Arocior-1242	8082 ⁽¹⁾	<1.0	1.0	ug/l	RDJ	11/03/2005	0044212-1	<1.0
Aroclor-1248	8082 ⁽¹⁾	<1.0	1.0	ug/l	RDJ	11/03/2005	0044212-1	<1.0
Arocler-1254	8082 ⁽¹⁾	<1.0	1.0	ug/l	ŘĎJ É	11/03/2005	0044212-1	<1.0
Arocler-1260	8082 ⁽¹⁾	<1.0	1.0	ug/l	RDJ	11/03/2005	0044212-1	<1.0
PCB Total-TCL	8082 ⁽¹⁾	<1.0	1.0:	ug/l	RDJ	11/03/2005	0044212-1	<1.0

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

VIL_RESP03493

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Result Inds by GC W846 8082 BRL BRL BRL BRL 262,000 BRL BRL BRL	4410 ug/kg dry		Method Ref. d SW846 3550) SW846 8082	Prepared B 19-Jan-04 " " " "	20-Jan-04 n n n u		MP
BRL	Prepared by 4410 ug/kg dry	/ method 100 100 100 100 100 100	d SW846 3550) SW846 8082	B 19-Jan-04 "	20-Jan-04 n n n u	4010841	MP
BRL BRL BRL BRL BRL BRL BRL BRL BRL 262,000 BRL BRL	4410 ug/kg dry	100 100 100 100 100 100	SW846 8082	19-3an-04	E II	11 11 11	U 91 44 44 44 44 44 44 44 44 44 44 44 44 44
BRL BRL BRL BRL 262,000 BRL BRL	4410 ug/kg dry	100 100 100 100 100 100	SW846 8082	19-3an-04	E II	11 11 11	U 91 44 44 44 44 44 44 44 44 44 44 44 44 44
BRL BRL BRL 262,000 BRL BRL	4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry	100 100 100 100 100 100	0 16 16 16	11 11 11	E II	11 11 11	U 91 44 44 44 44 44 44 44 44 44 44 44 44 44
BRL BRL BRL 262,000 BRL BRL	4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry	100 100 100 100 100	11 G 12	11 13 14	1) 12 14 16	11 11 11	91 41 51
BRL BRL 262,000 BRL BRL	4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry	100 100 100 100	11 14 14	14 31 14	11. 12. 15.	u 11	41 41 31
BRL 262,000 BRL BRL	4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry	100 100 100	6 tt	Ħ	rt 16	11	er er
262,000 BRL BRL	4410 ug/kg dry 4410 ug/kg dry 4410 ug/kg dry	100 100	tt D	м	t:	11	u
BRL BRL	4410 ug/kg dry 4410 ug/kg dry	100	0	M 71	u		
BRL	4410 ug/kg dry			71		u	н
		100	II.				
BRL	4440 77 1			н	11	đ	п
	4410 ug/kg dry	100	"	н	u	ıı	и
enyl (Sr) 65.5	40-140 9	6	11	H	11	tı	R
61 0	40-140 %	6	11	n	11	a	lπ
0 Series Metho	ods, Prepared by	SW846	3050B				
BRL	0.243 mg/kg dry	I	SW846 7471A	20-Jan-04	21-Jan-04	4010962	ΥP
es Methods							
BRL	2.61 mg/kg dry	1	EPA 200 7	D	21-Jan-04	4010959	НВ
17.5	3.91 mg/kg dry	1	ti	It	н	И	u
126	1.30 mg/kg dry	1	11	II.	и	n	u
BRL	0.651 mg/kg dry	1	11	11	n	I)	11
158	1.30 mg/kg dry	1	11	ĮI.	tt	rt .	н
109	1.95 mg/kg dry	1	11	tt.	a	u	II
	3.91 mg/kg dry	1	н	н	ч	Ħ	u
	17.5 126 BRL 158	17.5 3.91 mg/kg dry 126 1.30 mg/kg dry BRL 0.651 mg/kg dry 158 1.30 mg/kg dry 109 1.95 mg/kg dry	17.5 3.91 mg/kg dry 1 126 1.30 mg/kg dry 1 BRL 0.651 mg/kg dry 1 158 1.30 mg/kg dry 1 109 1.95 mg/kg dry 1	17.5 3.91 mg/kg dry 1 " 126 1.30 mg/kg dry 1 " BRL 0.651 mg/kg dry 1 " 158 1.30 mg/kg dry 1 " 109 1.95 mg/kg dry 1 " BRL 3.91 mg/kg dry 1 "	17.5 3.91 mg/kg dry 1 " " 126 1.30 mg/kg dry 1 " " BRL 0.651 mg/kg dry 1 " " 158 1.30 mg/kg dry 1 " " 109 1.95 mg/kg dry 1 " " BRL 3.91 mg/kg dry 1 " "	17.5 3.91 mg/kg dry 1 " " " " " " " " " " " " " " " " " "	17.5 3.91 mg/kg dry 1 " " " " " " " " " " " " " " " " " "

%

70.9

% Solids

SM2540 G Mod

16-Jan-04

19-Jan-04 4010781 LN

KATAHDIN ANALYTICAL SERVICES Report of Analytical Results

Client: Jacques Whitford Co Project: DEPOT ST./MEP03102

PO No:

Sample Date: 01/13/04 Received Date: 01/14/04 Extraction Date: 01/20/04

Analysis Date: 01/27/04 Report Date: 01/27/2004

Matrix: SOIL % Solids: 54.9

Lab ID: WU0086-1DL Client ID: SS101 (B)

SDG: WU0086

Extracted by: AZ

Extraction Method: SW846 3545

Analyst: LRS

Analysis Method: SW846 8082 Lab Prep Batch: WG5516

Units: ug/Kg

Compound	Flags	Results	DF	PQL	Adj.PQL
Aroclor-1016	υ	31000	1000	17	31000
Aroclor-1221	U	31000	1000	17	31000
Aroclor-1232	U	31000	1000	17	31000
Aroclor-1242	Ū	31000	1000	1.7	31000
Aroclor-1248	U	31000	1000	1.7	31000
Aroclor-1254		570000	1000	17	31000
Aroclor-1260	U	31000	1000	17	31000
Tetrachloro-m-xylene		D			
Decachlorobiphenyl		D			

Page 01 of 01 6UA3106.d

Sample Identification SS102 SA07300-02 Client Project # MEP03102 Matrix Soil Collection Date/Time 13-Jan-04 11:02 Received 15-Jan-04

aalyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst Fla
Semivolatile Organic Compoun	ds by GC		 -					
Polychlorinated Biphenyls by SW	846 8082	Prepared by	y m eth oo	1 SW846 3550E	3			
PCB 1016	BRL	6680 ug/kg dry	200	SW846 8082	19-Jan-04	20-Jan-04	4010841	MP
PCB 1221	BRL	6680 ug/kg dry	200	44	Ħ	11	41	11
PCB 1232	BRL	6680 ug/kg dry	200	М	11	41	11	н
PCB 1242	BRL	6680 ug/kg dry	200	IŢ	II.	11	II	н
PCB 1248	BRL	6680 ug/kg dry	200	п	u	н	н	II
PCB 1254	71,100	6680 ug/kg dry	200	It	II	п	п	IÌ
PCB 1260	BRL	6680 ug/kg dry	200	п	u	н	n	u
PCB 1262	BRL	6680 ug/kg dry	200	U	u	11		u
PCB 1268	BRL	6680 ug/kg dry	200	n	n	II.	a	n
Surrogate: 4,4-DB-Octafluorobiphen	yl (Sr) 70.3	40-140	%	ıı .	"			11
Surrogate: Decachlorobiphenyl (Sr)	62 8	40-140	%	11	"	п	11	H
General Chemistry Parameters								
% Solids	92.6	%	I	SM2540 G Mod.	16-Jan-04	19-Jan-04	4010781	LN

Sample Identification SS103		Client Project MEP03102	<u>#</u>	<u>Matrix</u> Soil	Collection 13-Jan-0		·	<u>Received</u> 5-Jan-04	
\$A07300-03			1	,					
Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Semivolatile Organic Compo	ınds by GC	<u>-</u>							
Polychlorinated Biphenyls by S	W846 <u>8082</u>	Prepared b	y method	SW846 3550	В				
PCB 1016	BRL	29800 ug/kg dry	1000	SW846 8082	19-Jan-04	20-Jan-04	4010841	MP	
PCB 1221	BRL	29800 ug/kg dry	1000	11	я	ır	н	и	
PCB 1232	BRL	29800 ug/kg dry	1000	**	II .	п	It	н	
PCB 1242	BRL	29800 ug/kg dry	1000	н	н	11	n	п	,
PCB 1248	BRL	29800 ug/kg dry	1000	и	и	**	u	u	
PCB 1254	138,000	29800 ug/kg dry	1000	n	IJ	и	н	и	
PCB 1260	BRL	29800 ug/kg dry	1000	11	к	и	Н	н	
PCB 1262	BRL	29800 ug/kg dry	1000	п	IS.	H	II.	н	
PCB 1268	BRL	29800 ug/kg dry	1000	a .	U	**	"	it.	
Surrogate: 4,4-DB-Octafluorobipha	enyl (Sr) 81.2	40-140	%	11	q	н	u	IE	
Surrogate, Decachlorobiphenyl (Sr.	65.8	40-140	%	н	u	н	u	u	
General Chemistry Parameter	·s								
% Solids	94 9	%	1	SM2540 G Mod	16-Jan-04	19-Jan-04	4010781	LN	

Sample Identification	Client Project #	Matrix
SS 104	MEP03102	Soil
S A 07300-04		

Collection Date/Time 13-Jan-04 11:08 Received 15-Jan-04

alyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst Fla
Semivolatile Organic Compou	nds by GC							
Polychlorinated Biphenyls by SY	<u> 7846 8082</u>	Prepared b	y metho	d SW846 3550E	3			
PCB 1016	BRL	29900 ug/kg dry	1000	SW846 8082	19-Jan-04	20-Jan-04	4010841	МР
PCB 1221	BRL	29900 ug/kg dry	1000	tt	u	u	t!	u
PCB 1232	BRL	29900 ug/kg dry	1000	स	11	u	u	tt.
PCB 1242	BRL	29900 ug/kg dry	1000	н	u	If	II.	II
PCB 1248	BRL	29900 ug/kg dry	1000		II	Ħ	tr	п
PCB 1254	100,000	29900 ug/kg dry	1000	4	н	Ħ	ır	II
PCB 1260	BRL	29900 ug/kg dry	1000	11	11	и	н	н
PCB 1262	BRL	29900 ug/kg dry	1000	п	u	য়	19	и
PCB 1268	BRL	29900 ug/kg dry	1000	и	II	"	N	ti
Surrogate: 4,4-DB-Octafluorobiphe.	nyl (Sr) 93.6	40-140	%	u u	l7	0	41	
Surrogate: Decachlorobiphenyl (Sr)	64.8	40-140	%	H	Ħ	н	u	tt
General Chemistry Parameters								
% Solids	90.9	%	1	SM2540 G Mod	16-Jan-04	19-Jan-04	4010781	LN

Sample Identification SS5 SA05661-04		Client Project # MEP		<u>Matrix</u> Soil	Collection 25-Nov-0			<u>eceived</u> 2-Dec-03
Analyte(s)	Result	*RDL/Units Dil	lution	Method Ref.	Prepared	Analyzed	Batch	Analyst Flag
Semivolatile Organic Comp	ounds by GC							
Polychlorinated Biphenyls b	y SW846 8082	Prepared by n	nethod	SW846 3550	В			
PCB 1016	BRL	39.2 ug/kg dry	1	SW846 8082	02-Dec-03	05-Dec-03	3120102	TG
PCB 1221	BRL	39.2 ug/kg dry	1	И	IL.	II	n	u
PCB 1232	BRL	39.2 ug/kg dry	1	п	u	D	Ü	u
PCB 1242	BRL	39.2 ug/kg dry	1	11	H	н	п	п
PCB 1248	BRL	39.2 ug/kg dry	I	u	h	и	n	u.
PCB 1254	44,800	39.2 ug/kg dry	1	II.	e e	11	14	ĸ
PCB 1260	32,200	39 2 ug/kg dry	1	И	ıţ	u	Ħ	π
PCB 1262	BRL	39.2 ug/kg dry	1	н	h	U	ø	10
PCB 1268	BRL	39.2 ug/kg dry	1	11	ц	11	11	n
Surrogate 4,4-DB-Octafluorobi	phenyl (Sr) 75.8	40-140 %		u u	н	н	0	II
$Surrogate \cdot Decachlorobiphenyl$	(Sr) 53.8	40-140 %		(t	U	н	u	"
General Chemistry Parame	ters							
% Solids	80.8	%	1 S	M2540 G Mod.	02-Dec-03	03-Dec-03	3120104	ln

Sample Identification SS6

Client Project # MEP <u>Matrix</u> Soil Collection Date/Time 25-Nov-03 12:25 Received 02-Dec-03

SA05661-05

alyte(s)	Result	*RDL/Units L	ilution	Method Ref.	Prepared	Analyzed	Batch	Analyst Flag
Semivolatile Organic Com	pounds by GC							
Polychlorinated Biphenyls b	<u>y SW846 8082</u>	Prepared by	method	1 SW846 35501	В			
PCB 1016	BRL	48.2 ug/kg dry	I	SW846 8082	02-Dec-03	05-Dec-03	3120102	TG
PCB 1221	BRL	48 2 ug/kg dry	1	μ	Ħ	п	11	tt.
PCB 1232	BRL	48.2 ug/kg dry	1	н	н	u	II	u
PCB 1242	BRL	48.2 ug/kg dry	1	11	11	u	0	B
PCB 1248	BRL	48.2 ug/kg dry	1	11	"	It	II	II.
PCB 1254	120,000	48.2 ug/kg dry	1	Įt.	tr	u	d	ri.
PCB 1260	53,500	48.2 ug/kg dry	1	if	u	II.	И	11
PCB 1262	BRL	48.2 ug/kg dry	1	и	u	н .	И	н
PCB 1268	BRL	48.2 ug/kg dry	1	н	и	н	Ħ	В
Surrogate: 4,4-DB-Octafluorob	iphenyl (Sr) 74.6	40-140 %	6	'n	H	Н	11	И
Surrogate: Decachlorobiphenyl	(Sr) 64.9	40-140 %	6	đ	11	11	u	н
General Chemistry Parame	eters							
% Solids	68.5	%	1	SM2540 G Mod.	02-Dec-03	03-Dec-03	3120104	ln

Sample Identification SS7		Client Project # MEP		<u>Matrix</u> Soil	Collection Date/Time 25-Nov-03 13:40			Received 02-Dec-03	
SA05661-06								4	
A nalyte(s)	Result	*RDL/Units D	ilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Semivolatile Organic Comp	ounds by GC								
Polychlorinated Biphenyls by	SW846 8082	Prepared by	method	SW846 3550	В				
PCB 1016	BRL	33.1 ug/kg dry	1	SW846 8082	02-Dec-03	05-Dec-03	3120102	TG	
PCB 1221	BRL	33,1 ug/kg dry	1	11	u	ы	и	ø.	
PCB 1232	BRL	33.1 ug/kg dry	1	п	11	11	Į I	н	
PCB 1242	BRL	33.1 ug/kg dry	1	ıt	II.	a	u	n	
PCB 1248	BRL	33.1 ug/kg dry	1	н	п	н	11	п	
PCB 1254	13,100	33 1 ug/kg dry	1	u	11	μ	н	ч	
PCB 1260	BRL	33.1 ug/kg dry	1	н	46	0	н	н	
PCB 1262	BRL	33.1 ug/kg dry	1	п	н	If	ч	n	
PCB 1268	BRL	33.1 ug/kg dry	1	n	н	и	o o	14	
Surrogate: 4,4-DB-Octafluorobij	ohenyl (Sr) 81.9	40-140 %	6	ц	"	н	II II	11	
Surrogate Decachlorobiphenyl ((Sr) 59.2	40-140 %	6	II	н	ų	н	u	
General Chemistry Paramet	ers								
% Solids	95.5	%	1	SM2540 G Mod	02-Dec-03	03-Dec-03	3120104	ln	

Sample Identification	Client Project #	<u>Matrix</u>	Collection Date/Time	Received
SS8	MEP	Soil	25-Nov-03 13:50	02-Dec-03
SA05661-07 ,				

alyte(s)	Result	*RDL/Units L	dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst Fla
Semivolatile Organic C	Compounds by GC							
Polychlorinated Bipheny	uls by SW846 8082	Prepared by	metho	d SW846 35501	3			
PCB 1016	BRL	54.6 ug/kg dry	1	SW846 8082	02-Dec-03	05-Dec-03	3120102	TG
PCB 1221	BRL	54.6 ug/kg dry	1	a	II	п	Ħ	11
PCB 1232	BRL	54.6 ug/kg dry	1	ĸ	н	tr	11	N.
PCB 1242	BRL	54,6 ug/kg dry	1	11	н	It	U	II
PCB 1248	BRL	54.6 ug/kg dry	Ī	п	11	н	U	н
PCB 1254	11,200	54.6 ug/kg dry	1	и	п	н	н	tt
PCB 1260	BRL	54.6 ug/kg dry	1	n	11:	11	н	ш
PCB 1262	BRL	54.6 ug/kg dry	1	ų	8	ıı	11	II;
PCB 1268	BRL	54.6 ug/kg dry	1	n	я	U	O O	ıt
Surrogate 4,4-DB-Octaflue	orobiphenyl (Sr) 83.5	40-140 %	6	н	ıı	н	II.	N
Surrogate [,] Decachlorobiph	enyl (Sr) 60.6	40-140 %	6	Ħ	ų	н	н	н
General Chemistry Par	ameters							
% Solids	90.3	%	l	SM2540 G Mod.	02-Dec-03	03-Dec-03	3120104	ln

Sample Identification SS9		Client Project # Matri MEP Soil		<u>Matrix</u> Soil			<u>Received</u> 02-Dec-03		
SA05661-08		IVILLI		*	25 1(0)	33 13.30	0.2	2 DCC V	,
Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batc h	Analysi	Flag
Semivolatile Organic Co	mpounds by GC								
Polychlorinated Biphenyls	<u>by SW846 8082</u>	Prepared b	y metho	1 SW846 3550	В				
PCB 1016	3,210	47.6 ug/kg dry	1	SW846 8082	02-Dec-03	05-Dec-03	3120102	TG	
PCB 1221	BRL	47.6 ug/kg dry	1	11	п	11	н	R	
PCB 1232	BRL	47.6 ug/kg dry	1	u	u u	п	н	п	
PCB 1242	BRL	47.6 ug/kg dry	1	п	H	п	0	п	
PCB 1248	BRL	47.6 ug/kg dry	1	α	я	ч	tr	ď	
PCB 1254	9,590	47.6 ug/kg dry	1	D	-0	u	н	ų.	
PCB 1260	3,540	47.6 ug/kg dry	1	н	u	п	я	If	
PCB 1262	BRL	47.6 ug/kg dry	1	fi	μ	t†	u	u	
PCB 1268	BRL	47.6 ug/kg dry	1	11	tt	и	St.	п	
Surrogate. 4,4-DB-Octafluor	obiphenyl (Sr) 819	40-140	%	H		ıı	и,	ti	
Surrogate: Decachlorobipher	ıyl (Sr) 121	40-140	%	н	н	II	и	u	
General Chemistry Paran	neters								
% Solids	90.4	%	1	SM2540 G Mod.	02-Dec-03	03-Dec-03	3120104	ln	

Sample Identification SS 10

SA05661-09

Client Project # MEP <u>Matrix</u> Soil Collection Date/Time 25-Nov-03 14:00

Received 02-Dec-03

analyte(s)	Result	*RDL/Units I	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst Flag
Semivolatile Organic Co	mpounds by GC							
Polychlorinated Biphenyls	s by S W84 6 8082	Prepared by	y method	3 SW846 3550	В			
PCB 1016	BRL	43.9 ug/kg dry	1	SW846 8082	02-Dec-03	05-Dec-03	3120102	TG
PCB 1221	BRL	43.9 ug/kg dry	1	п	ų.	tt	41	н
PCB 1232	BRL	43.9 ug/kg dry	1	11	II .	п	U	п
PCB 1242	BRL.	43.9 ug/kg dry	1	п	II	II	u	41
PCB 1248	BRL	43.9 ug/kg dry	1	н	n	н	п	9
PCB 1254	5,100	43.9 ug/kg dry	1	н	н	11	н	п
PCB 1260	BRL	43.9 ug/kg dry	1	и	u	ti	11	н
PCB 1262	BRL	43.9 ug/kg dry	I	U	B	п	n.	Ħ
PCB 1268	BRL	43.9 ug/kg dry	1	H	n	II.	6	11
Surrogate: 4,4-DB-Octafluore	obiphenyl (Sr) 106	40-140 9	%	н	Ņ	II	Л	п
Surrogate: Decachlorobiphen	ıyl (Sr) 106	40-140 9	%	11	ti	н	u	ıf
General Chemistry Parar	neters							
% Solids	88.9	%a	ž	SM2540 G Mod.	02-Dec-03	03-Dec-03	3120104	ln



MAINT HISTORIC PRESERVATION COMSUSSION
58 CAPITOL STREET
68 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JOHN ELIAS BALDAGO:

December 19, 2005

EARLE O SHETALLWORTH, JR

2485C-034

Lec Allen, P.E. Northeast Civil Solutions 153 U.S. Route 1 Scarborough, ME 04074

Project:

MHPC #3091-05 - proposed Village at Little Falls; Route 202, S. Windham

Town:

Windham ME

Dear Mr. Allen:

In response to your recent request, I have reviewed the information received Navember 29, 2005 to initiate consultation on the above referenced project pursuant to Maine's Site Location of Development Law.

Based on the location and scope of work, I have concluded that the proposed development, in particular the southerly (downstream) extension of row housing (southernmost 13 units) may have a direct or indirect impact on archaeological site 8.20, a National Register eligible Archaic and Ceramic period site discovered and tested during hydroelectric relicensing studies. The limits of archaeological site 8.20 have not been determined so far. The enclosed graphics show (in red) archaeological excavation units on site 8.20, and an approximation of the proposed downstream limits of the Little Falls Village construction area.

Additional information on direct and indirect impacts that could result from the proposed undertaking, including stormwater drainage and proposed riverbank access, will be necessary. Further archaeological vesting (Phase II) of the area of direct impact at the downstream end of the proposed project will also be necessary to determine whether site 8-20 extends into that area. Please contact Dr. Arthur Spiess, Senior Archaeologist of the Maine Historic Preservation Commission, for further information.

A list of qualified archaeologists is enclosed along with material explaining the Phose I/II/III approach to archaeological survey. This office must approve any proposal for archaeological fieldwork.

Sincerely,

HECENVED

DLC 2 1 7315

Earle G. Shettleworth, J

State Historic Preservation Officer

one:



VIL_RESP03505

Rev 08/18/05

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Main's Historic Preservation Commission to capital street as stall house station Augusta, maine (43)3

JOHN ELIAS BALDACO

Prehistoric Archeologists Approved List: Review and Compliance Consulting/Contracting (Active) August 18, 2005

EARLES SHETTLEWORTH JR

9 mats

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Ms. Edna Feighner (207/879-9496) M. H.Division of Historical Resources Box 2043 Concord, N. H. 03302-2043 (Weighner@NHCHR.state.nh.us

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Or. Leslie Shaw (207/725-3815) Dept. of Socialogy & Anthropology Bowdom College Brunswick, Mc. 04011 o-mail: Ishaw@bowdom.edu

12. William R. Beleher U.S. Army CH.HI 310 Worchester Avenue, Building 45 Hickian AFB, Hi. 96853-5530 wbelchen@msn.com

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Deborah Wilson (863-1385). 374 Bayview Road Nobleboro, Me. 04555 dwil@gwd.net

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Or. Steven L. Cox (207/287-3909)
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